Interim Report

Independent Evaluation of the California Tobacco Control Prevention & Education Program: Wave 2 Data, 1998 Wave 1 & Wave 2 Data Comparisons, 1996 – 1998

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for

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I. INTRODUCTION

The California Tobacco Control Program

In November 1988, California voters passed Proposition 99, the Tobacco Tax and Health Promotion Act, which established the California Tobacco Control Prevention and Education Program (TCP). This referendum increased the state cigarette tax from 10 to 35 cents per pack, added a proportional tax increase on other tobacco products, and earmarked the new revenues for tobacco control, medical care, and research activities. It launched one of the largest public health interventions of its kind ever initiated, nationally or internationally.

Total funding for the TCP has fluctuated considerably over the ten-year program period. From the first to the seventh year of the program, there was a 60% reduction in total funding (from $131.3 million in 1989/90 to $53.4 million in 1995/96). From 1995/96 to 1997/98, total funding more than doubled (from $53.4 million to $140.7 million), however it declined again in 1998/99 (to $105.8 million).

The baseline year for this Independent Evaluation of the California Tobacco Control Program assessed tobacco control activities during fiscal years 1994/95 and 1995/96, which represented the lowest points in funding levels since the inception of the program. The second wave of data collection for the Independent Evaluation, which is described in this report, assessed tobacco control activities during 1996/97 and 1997/98, when total funding had increased to levels close to the allocations in the first year of the program.

The primary goals of the California TCP are: (1) to reduce tobacco use among adults and youth; and (2) to reduce exposure to environmental tobacco smoke (ETS). Since its inception, the program has been comprehensive, integrated, and comprised of multiple interventions that address individual, social, and environmental factors that contribute to tobacco use. Since 1994, the TCP has emphasized changing the broader social environment in which tobacco use occurs. The focus has been on "denormalizing" or reducing the acceptability of tobacco use in California communities. The three areas of programmatic focus for denormalization include:

1. Countering pro-tobacco influences in the community;
2. Reducing exposure to environmental tobacco smoke (ETS); and
3. Reducing youth access to tobacco through retail and social sources.

The primary TCP components include: 1) community programs, 2) the statewide mass media campaign, and 3) the school-based Tobacco Use Prevention Education (TUPE) program.

1. Community programs are administered by Local Lead Agencies and community-based organizations that are awarded competitive grants. These agencies and organizations implement a broad range of community- and environmental-level interventions, coordinate local tobacco control activities, and provide technical assistance on program planning. The competitive grants program also provides funds to established networks of agencies that serve each of the four largest ethnic groups in California (African Americans, Hispanics, Asian/Pacific Islanders, and American Indians), and it funds 11 regional community linkage projects that organize local governments and community-based organizations to work outside their geographic boundaries on tobacco control initiatives.

2. The statewide mass media campaign consists of outdoor advertising, print media, and paid advertisements on radio and television. The campaign is designed to frame and support the issues upon which local community programs act, keep tobacco at the forefront of the public's awareness, reduce the social acceptability of tobacco use in California, and publicize toll-free numbers for tobacco cessation and reporting illegal tobacco sales to youth.
3. The school-based Tobacco Use Prevention Education (TUPE) program provides funding for local educational agencies to implement tobacco prevention, education, and cessation programs for youth. Components include entitlements for in-school tobacco prevention programs for students in grades four through eight, competitive grants for tobacco prevention and cessation for students in grades nine through twelve, competitive grants for innovative projects, and funding to county offices of education for technical assistance to school districts.

Overview of This Independent Evaluation

The overall purpose of the Independent Evaluation is to assess the effectiveness of tobacco control activities conducted through community programs, schools, and the statewide media campaign. The evaluation is designed to help the California Department of Health Services and the California Department of Education allocate resources and adjust programmatic guidelines so as to accomplish the goals of the California Tobacco Control Program. The Independent Evaluation:

1. Provides an accounting of the use of TCP funds by describing Proposition 99-funded community programs, media and public relations efforts, and school-based programs;
2. Assesses the combined (overall) and independent effects of community program efforts, the statewide media campaign, and school-based programs on intermediate and ultimate TCP outcomes; and
3. Monitors changes in the tobacco industry's advertising and promotional activities in California.

The Independent Evaluation is a multi-method, longitudinal study that includes three waves of data collection, separated by 18-month intervals. The baseline wave was conducted from October 1996 to February 1997, and focused on tobacco control activities in 1995 and 1996. The second wave of data collection took place from March to July 1998 and focused on tobacco control activities during 1997 and 1998. The third wave of data collection is being conducted from October 1999 to February 2000.

This report provides a synopsis of the major findings of the second wave of the Independent Evaluation. It describes TCP activities, relationships between exposure to program activities and outcomes, and changes in program outcomes from the first to second waves of data collection (1996 to 1998).

See the magnifying glass icon () for key findings.

II. KEY FINDINGS

The Tobacco Marketing Environment in California

 Tobacco advertising on billboards has been declining in California and was eliminated by the November 23, 1998 Master Settlement Agreement between the major tobacco corporations and the Attorneys' General of 46 states. A survey of billboards in 1998 found:

- One-third of the tobacco billboards in the study were within 1000 feet of public schools or playgrounds.
- Billboards observed in 1998 did not provide evidence of greater density or concentration in specific ethnic neighborhoods.

There were 267 tobacco-sponsored public events identified in California in 1998.

- Predominant events sponsors were RJ Reynolds (59% of tobacco-sponsored events, most of which were Winston car races), Kodiak Tobacco (12%, all which were fishing derbies), Philip Morris (11%, most of which were ballet performances), US Tobacco (9%, most of which were Copenhagen-Skoal rodeos).
- Most tobacco-sponsored events were part of a series that traveled nationwide, with the sponsorship organized at the national level.

The prevalence of tobacco marketing and sponsorship at events has declined since 1996.

- In a 1998 survey of large events in 18 California counties, 10% of the events had tobacco company support through advertising or marketing. This has decreased from 15% observed in 1996.
- This same survey revealed that tobacco-supported events tended to draw a larger median audience size (80,000 people) than non-tobacco events (9,000 people).

National magazines with high California readership had relatively high levels of tobacco advertising (2.3 ads per issue).

- Magazines aimed at young adults and men had significantly more tobacco ads per issue than magazines aimed at women, African Americans, Latinos, the general audience, or local geographic regions in California ($p<.05$).
- Among the 18 publications in our study, six magazines had at least 10% readership among youth 12 to 17 years old. Five of these six had higher than average levels of tobacco advertising per issue (*Field and Stream*, 6.0 ads per issue; *Spin*, 5.0 ads per issue; *Rolling Stone*, 5.0 ads per issue; *Sports Illustrated*, 3.4 ads per issue; *Ebony*, 2.5 ads per issue).

California cigar night listings in *Cigar Afficionado* increased between 1996 and 1998, but interest in these nights seems to be waning.

- In 1998, there were .26 cigar nights listed per 100,000 people in California, or about 85 listings in each issue of *Cigar Afficionado*, up from .16 in 1996. Most of these listings were in Los Angeles, followed by San Francisco and San Diego.
- A phone survey to 25% of these establishments revealed that only 50% had actually held a cigar night in the past year, and 60% of those sites did not plan to hold another. Most establishments attributed the decline in customer interest to the new provision of California's Smokefree Workplace Act (Assembly Bill 13). This provision, which went into effect on January 1, 1998, prohibits smoking in bars, taverns, and gaming clubs. Assembly Bill 13 (AB 13) was enacted on January 1, 1995, and originally banned smoking in most enclosed workplaces, with the most notable exceptions being bars, taverns, and gaming clubs.

Tobacco advertising has increased in most types of California newspapers from .11 ads per issue in 1996 to .27 ads per issue in 1997/98. Tobacco ads were most frequent in weekly entertainment

newspapers (4.4 ads per issue in 1997/98) followed by African American newspapers (.18 ads per issue).

- The majority of tobacco ads in African American and Hispanic newspapers were corporate promotional messages from three sources: Philip Morris (45%), Brown and Williamson (16%) and RJ Reynolds (9%). Common themes included announcements that the corporation cards minors trying to buy cigarettes; support for the arts, the Black Press, and scholarships; and explanations about the Tobacco Settlement.

Tobacco-sponsored bar nights were heavily advertised in weekly entertainment newspapers in large cities, and this increased from 0.4 ads per issue in 1996 to 2.5 ads per issue in 1998. These types of marketing efforts have not abated despite the application of AB 13 to bars and clubs, nor do they appear to be facing any restrictions in the future.

Retail advertising of tobacco products is very high, with an average of 17.1 advertisements per store.

- Almost half the stores have displays that are at or under 3 feet from the floor, making them most visible to children.
- Marlboro dominates the retail environment, with an average of 5 items per store, followed by Camel with an average of only 2 ads per store.
- Fifty-eight percent of retail stores report they receive incentives from tobacco companies to prominently place and promote the sale of their products. Sixty-two percent of these stores report they receive monetary incentives of about $578 per quarter. This exceeds the amounts received from other product types.
- More stores receive incentives from Philip Morris (57%), RJ Reynolds (54%), and Brown and Williamson (41%) than from other tobacco companies.
- Only 53% of the stores displayed Stop Tobacco Access to Kids Enforcement (STAKE) Act signs "1-800-ASK 4 ID." The STAKE Act is California's law designed to protect the health of children by prohibiting the illegal sale or furnishing of tobacco products to youth.

Tobacco brand merchandise catalogues and direct-mail appeals continue to be circulated in California.

- Most of the materials found in stores promoted three specific brands, predominantly Marlboro (71%), Camel (11%) and Winston (10%).
- Materials most frequently received through the mail were flyers for the Proposition 10 campaign (20%), and Marlboro catalogues (20%).

Tobacco advertising is facing few restrictions with the advent of the Master Settlement Agreement. The settlement eliminates tobacco billboard advertising, which is already declining in California. It will not affect newspaper advertising, which is on the rise. It may limit advertising in magazines with substantial youth readership, and these magazines have some of the highest levels of tobacco advertising. It may change the nature of event sponsorship in California, so that more national contracts are established, but it will not eliminate it, and may not even reduce it for the next year or two while existing contracts run their course. Direct mail and catalogue sales may decline if photocopies of ID must be sent when coupons are exchanged, but there is no provision that will stop the volume of direct mail appeals. Retail advertising displays inside stores remain unaffected.

Local Tobacco Control Programs

Countering Pro-Tobacco Influences (CPTI)

The evaluation found significant relationships between the TCP and CPTI indicators.

At the county level, the amount of TCP effort put into passing local laws to reduce tobacco advertising in stores and on billboards was associated with more positive CPTI outcomes. Specifically, adults living in counties with higher levels of CPTI effort:

- Were more concerned about the problem of tobacco advertisements in their community (correlation = .46, $p<.01$)
- Reported talking more frequently with others about the problem of tobacco advertising and marketing (correlation = .41, $p<.01$)
- Supported CPTI policy restrictions at higher levels (correlation = .59, $p<.01$)
- Held more negative views of the tobacco industry (correlation = .61, $p<.01$)

Local policy activity to increase CPTI restrictions increased substantially from 1996 to 1998. The number of policies initiated increased almost twofold from 9 to 17; the number of restrictions that were passed increased from 0 to 24.

Tobacco marketing and advertising remains prevalent in communities. More Californians reported seeing tobacco advertisements in 1998 compared to 1996 in at least four venues: at community events, in newspapers and stores, and on billboards.

The public is concerned about the amount of tobacco advertising and marketing in their communities. One-half of adults, 44% of 8th-grade youth, and one-third of 10th-grade youth thought that it is a serious problem that tobacco products are advertised in their community.

Adults and youth are skeptical of the tobacco industry's practices. In 1998, more than three-fourths of adults thought that tobacco companies are generally dishonest in their information they give the public about their products, try to get youth to start smoking by using advertisements that are attractive to youth, and increase nicotine in cigarettes to get people addicted to tobacco. From 1996 to 1998, 10th-grade youths' views about the tobacco industry became more negative.

The public supports restrictions on tobacco advertising and marketing. In 1998, from one-half to two-thirds of adults and opinion leaders supported restrictions to ban tobacco advertising on billboards and in stores, to ban tobacco sponsorship of sporting and community events, and to reduce the amount of smoking on TV programs and in films.

Reducing Environmental Tobacco Smoke (ETS)

The evaluation found significant relationships between the TCP and reductions in ETS.

- Counties that put the most effort into their ETS programs showed more change between 1996 and 1998 than counties that put less effort, for the following adult outcomes:

- reduced exposure to ETS at home (correlation = .40 for all adults, p=.10 and .24 for nonsmokers, n.s.)
- reduced exposure to ETS at work (correlation = .60 for all workers, p<.01 and .63 for nonsmokers, p<.01).

- Moderately strong positive relationships were found between county effort and

  - more bans on smoking in cars (correlation = .32 for all adults).
  - greater frequency of asking others not to smoke (correlation = .29 for all adults).

In 1998, the vast majority of California adults (83% nonsmokers, 52% smokers) were not exposed to ETS in their homes or at work (76% nonsmokers, 74% smokers). This represents a slight (nonsignificant) increase since 1996, when 82% of nonsmokers and 48% of smokers were not exposed at home, and 74% of nonsmokers and 68% of smokers were not exposed at work.

- Nonsmokers at highest risk for exposure to ETS at home on a daily basis included African-Americans (vs. other ethnic groups), and those 18-24 years of age (vs. older adults).
- Hispanics and those with less education were at highest risk for exposure to ETS at work five or more days per week.

From 1996 to 1998, there was a decrease in the percentage of children who were exposed to ETS regularly; however, large proportions of children still are not protected from ETS at home, in cars, and in other indoor settings.

- Among 10th-graders, exposure to indoor ETS at least one day during the past week declined from 66% (1996) to 58% (1998), p<.05. Exposure to ETS in a car decreased from 44% (1996) to 39% (1998), p<.01.
- The proportion of parents with children under 18 years old who reported a complete ban on smoking in their home increased from 1996 to 1998 among both nonsmokers (from 86% to 90%, n.s.) and smokers (from 51% to 55%, n.s.).
- In 1998, only one-third of smokers with children had a ban on smoking in their family car.

Enforcement agencies were active in enforcing the smoke-free bar law enacted in January 1998.

- On average, agencies that issued citations to bars did so about 5.7 times in the first six months after the smoke free bar law went into effect. If a citation was issued, it had a 60% chance of being prosecuted. Rural areas had the most challenges in enforcing the smoke free bar law.
- Enforcement of the smoke free bar law was higher if the enforcement agency thought ETS and its enforcement was a serious problem and if they collaborated more with other community groups.

In 1998, social acceptance of smoking in hotel lobbies and bus shelters was low among both smokers and nonsmokers, suggesting that these might be the next areas in which to extend the public's protection from ETS since they are exempt from AB 13.

Reducing Youth Access to Tobacco

- The evaluation did not find significant relationships between the TCP and youth access outcomes.
  - At the county level, the amount of TCP effort put into activities to reduce youth access to tobacco was not related to two major youth access outcomes: the percent of 10th-grade youth who reported it was difficult to obtain cigarettes from stores in 1998, and the amount of change from 1996 to 1998 in youth-reported difficulty of obtaining cigarettes.
  - However, in counties that put more effort into youth access activities, the enforcement staff were more likely to conduct stings of tobacco merchants ($p<.10$).
- Local policy activity to increase youth access restrictions was fairly constant between 1996 and 1998. The number of policies initiated was 19 in 1996 and 20 in 1998; the number of restrictions that were passed was 12 in 1996 and 13 in 1998.
- Although TCS-sponsored purchase surveys found that California's rate of illegal sales to minors dropped from 21.3% in 1997 to 13.1% in 1998, youth in our surveys still report that it is easy for them to obtain tobacco products.
  - In 1998, 57% of 10th-grade youth reported that it was easy for them to buy tobacco from stores and 89% reported tobacco was easy to obtain from social sources (e.g., friends, family, or strangers). In 1996, 89% of 10th-graders said that it was "sort of easy" or "very easy" for them to obtain tobacco products, and in 1998 this number decreased nonsignificantly to 87%.
- From 1996 to 1998, the proportion of 10th-graders getting their last cigarette from a retail outlet dropped from 14% to 10% (n.s.), whereas, the proportion obtaining from a social source increased from 71% to 77% (n.s.).
- Friends are the primary social source of cigarettes for youth. Strangers who are asked to buy cigarettes for minors tend to be smokers, younger adults, male, and those with lower income.
- Comparing 1996 to 1998, enforcement agencies increased their enforcement efforts on citing youth for possession of tobacco, but did not increase the amount of enforcement directed toward merchant compliance with youth access laws.
  - Whereas 66% of agencies issued a citation to merchants in the past year, 88% issued citations to minors ($p<.05$).
  - The majority of local enforcement agencies are not conducting stings of merchants, despite nearly a decade's worth of research that shows this is the most effective activity to reduce the rate of illegal tobacco sales to minors.

The Statewide Media Campaign

- Almost all youth and adults were exposed to the media campaign in 1998. More than nine out of ten 8th-graders (93%), 10th-graders (95%), adults (91%) and opinion leaders (95%) saw one or more of the TCP media campaign advertisements on television, radio, or billboards.

- Exposure to the general audience media campaign was significantly greater in 1998 than in 1996 for 8th-grade and 10th-grade youth and opinion leaders (p's<.01), while there was no difference in exposure for adults.

- In 1997–1998, the general audience media campaign focused most of its advertising expenditures on ETS (44% of expenditures), followed by countering pro-tobacco influence (34%), and cessation/prevention messages (20%). A small proportion of the statewide media expenditures was focused on youth access (2%).

- Among adults and opinion leaders, recall of individual ads was highest for Voicebox and Waitress. Among youth, recall was highest for Voicebox, Rain, Cattle, and Toilets. All of these ads ran on television. Television ads generated better exposure than radio and billboard ads, especially among youth.

- Voicebox and Bob generated more discussion among adults and key opinion leaders than the other media ads. Among youth, Voicebox was discussed more frequently than the other ads.

- One-third of youth (39% of 8th-graders, 33% of 10th-graders) considered not smoking after viewing Voicebox.

- The media campaign was associated with personal actions and beliefs that could lead to reductions in ETS risk. However, it was not associated directly with lower ETS exposure. Among those with greater media campaign exposure:

  - Youth and adults were more likely to believe that ETS causes cancer (correlation = .21 for 8th-graders and 10th-graders, p's<.01; correlation = .18 for adults, p<.01)
  - Adults were more likely to ask others not to smoke (correlation = .10, p<.01)

- The media campaign had positive outcomes related to adults' attitudes and beliefs about smoking in bars. Adults who had more exposure to the media campaign were more likely to:

  - Prefer smoke free bars (correlation = .08, p<.01)
  - Understand the reason for the restrictions on smoking in bars (correlation = .18, p<.01)
  - Not believe the law on smoking in bars should be overturned (correlation = -.11, p<.01)

- During 1998, exposure to the campaign was associated with more negative attitudes towards the tobacco industry (correlation = .33 for 8th-graders, .18 for 10th-graders, .25 for adults; p's<.01) and more support, among youth, for policies restricting tobacco marketing (correlation = .08 for 8th-graders, .07 for 10th-graders; p's<.01).

- Among youth, greater exposure to the media campaign was associated with certain beliefs about tobacco:

  - More beliefs about the negative consequences of smoking (correlation = .17 for 8th-graders, .18 for 10th-graders; p's<.01)
  - Fewer beliefs about the positive consequences of smoking (correlation = -.21 for 8th-graders, -.16 for 10th-graders; p's<.01)

- Less susceptibility to smoking (correlation = -.07 for 8th-graders, -.05 for 10th-graders; p's<.01)
- Among 8th-graders, a stronger belief that they could refuse tobacco offers from friends (correlation = .18, p<.01)
- Among 10th-graders, a lower perceived prevalence of peer smoking (correlation = -.11, p<.05).

Greater media campaign was associated with slightly lower smoking, more helpline calls and more quit attempts among smokers:

- Lower 30-day smoking among youth (correlation = -.06 for 8th-graders, -.10 for 10th-graders, p's<.01; non-significant for adults)
- More calls to the quit-smoking helpline among 8th-graders (correlation = .13 for 8th-graders, p<.01; non-significant for 10th-graders and adults)
- More quit attempts in the past six months among 8th-graders and adults (correlation = .13 for 8th-graders, .07 for adults; p's<.01; non-significant for 10th-graders).

Opinion leaders who saw or heard more of the statewide media campaign were more likely to believe tobacco is a problem, believe that tobacco ads influence youth, support tobacco regulations, and participate in local tobacco control activities (p's<.01).

School-based Tobacco Use Prevention Education (TUPE) Program

From school years 1995-96 to 1996-97, there was an increase in the percentage of 5th- and 8th-grade teachers who taught at least one tobacco lesson (54% to 78% for 5th-grade teachers, p<.01; 61% to 72% for 8th-grade science and health teachers; non-significant). Instruction about the physiologic consequences of tobacco use was more common than discussion of psychosocial factors related to tobacco use. The prevalence of school-wide activities, such as Great American Smokeout events, tobacco-specific contests and assemblies, peer education programs, and anti-tobacco clubs did not change significantly for either elementary or middle/junior high schools.

Comprehensive high schools that had TUPE competitive grant funds in school year 1996-97 ("Grantees") were significantly more likely to have a tobacco cessation program for students (92%) than were Non-grantee high schools (42%) (p<.01). Cessation programs were less prevalent in continuation high schools, with 50% of Grantees and 55% of Non-grantees reporting they had a program. However, in both continuation and comprehensive high schools, only about one-third of student smokers were aware of the cessation program at their school.

As of February 1999, 97% of school districts in California had adopted a policy that prohibits the use of tobacco by all students, school staff, parents, and visitors in district-owned or leased buildings, on district grounds, and in district vehicles.

- There was a nonsignificant increase in comprehensive high school teachers' perceptions of student compliance with school tobacco-free policies. In 1998, teachers were less likely to report that "most" or "all" high school student smokers violate the policy (12%) than in 1996 (20%).
- High school students reported lower policy compliance than did teachers. In 1998, 41% of 10th-grade students in comprehensive high schools and 40% of students in continuation high schools reported that "most" or "all" student smokers violate the policy at their school.

- In 1998, 24% of teachers reported they had participated in some type of in-service tobacco prevention training during the previous five years. The majority of this training addressed general information about tobacco rather than how to implement specific prevention programs.

- From 1996 to 1998, the prevalence of 30-day cigarette smoking decreased significantly among 10th-grade students in comprehensive high schools ($p<.01$). During the same period, the 30-day smoking prevalence remained constant at 4.6% among 5th-graders and 17.1% among 8th-graders. In 1999, 55.6% of continuation high school students reported smoking cigarettes in the past 30 days.

- From 1996 to 1998, the percentage of 8th-grade and 10th-grade comprehensive high school smokers who had tried to quit smoking during the previous year increased from significantly (53% to 66% for 8th-graders, $p<.01$; 45% to 63% for 10th-graders, $p<.01$).

- Among 5th-graders, there was a significant decrease in the percentage of students who agreed with specific statements about the positive consequences of tobacco use ($p<.01$). However, among 8th-graders, there was a significant increase in beliefs about positive consequences and a significant decrease in beliefs about negative consequences of tobacco use (p's$<.01$).

- Among 5th-graders, there was a decrease in the percentage of students who believed that cigarette use is acceptable among their peers ($p<.10$). However, among 8th-graders, there was an increase in perceived acceptability of smoking ($p<.10$).

- The percentage of students who reported it would be easy to say 'no' to friends' cigarette offers increased from 66% to 69% for 5th-graders ($p<.05$) and from 76% to 79% for 8th-graders ($p<.01$).

- From 1996 to 1998, tobacco-related knowledge scores increased significantly among 8th-graders (from 57% to 61% correct; $p<.01$) and remained stable among 5th-graders (at 58% correct).

- The evaluation found few significant relationships between exposure to the TUPE program and changes in relevant outcomes.

    - Among 5th-graders, greater program exposure during school year 1996-97 was associated with greater changes in students' beliefs about the positive and negative consequences of tobacco use and tobacco-related knowledge (p's$<.01$) from 1996 to 1998.
    - Among 8th-graders, program exposure was associated with changes in lifetime smoking prevalence only.

- In 1998, there were the following differences in student outcomes for TUPE Grantee and Non-grantee comprehensive high schools:

    - Students in Grantee high schools had slightly higher rates of lifetime smoking than students in Non-grantee high schools (59% vs. 58%, $p<.05$).
    - Students in Grantee high schools had higher tobacco-related knowledge scores (69%) compared to students in Non-grantee high schools (66%) ($p<.10$).

The differences between the two types of schools on other relevant outcome variables, including quit attempts during the past year, beliefs about tobacco use consequences, perceived peer norms, refusal self-efficacy, and negative attitudes toward the tobacco industry were not significant.

- In 1999, there were no significant differences in student outcomes between Grantee and Non-grantee continuation high schools.

Overall Impact of the California Tobacco Control Program

- Most Californians were exposed to tobacco control messages through at least two different components (media, community, and/or school).

  - Only 5% of 8th-graders, 4% of 10th-graders, and 2% of adults did not report exposure to any programs.
  - 73% of 8th-graders, 84% of 10th-graders, and 80% of adults were exposed to tobacco control programs through two or more components.

- Youth were most likely to be exposed to tobacco control messages through multiple components if they were White or nonsmokers.

- Adults were most likely to be exposed to tobacco control messages through multiple components if they were:

  - White or African-American
  - 50 years of age or younger
  - At least high school graduates

To examine relationships between exposure to the TCP and tobacco control outcomes, we created a *Multi-Component Exposure* measure which represents the percent of respondents in each county who were exposed to tobacco control programs through more than one component.

- In counties with higher Multi-Component Exposure, there were:

  - Greater decreases in 10th-graders' perceived peer smoking norms from 1996 to 1998 (effect size = .29)
  - Greater declines in 10th-graders' perceived access to cigarettes from 1996 to 1998 (effect size = .30)

- In counties with high Multi-Component Exposure, 8th-graders' perception of the importance of tobacco-related issues remained stable from 1996 to 1998, whereas in counties with low to moderate Multi-Component Exposure, 8th-graders' viewed tobacco-related issues as less important in 1998 than 1996 (effective size = .45).

- In counties with high Multi-Component Exposure, adult smoking prevalence declined (effective size = .54). In counties with low to moderate Multi-Component Exposure, adult smoking prevalence remained constant or increased.

- In counties with high Multi-Component Exposure, there were increases in the percent of adults who had asked someone else not to smoke in the past year (effect size = .38).

CHAPTER 1

INTRODUCTION

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INTRODUCTION

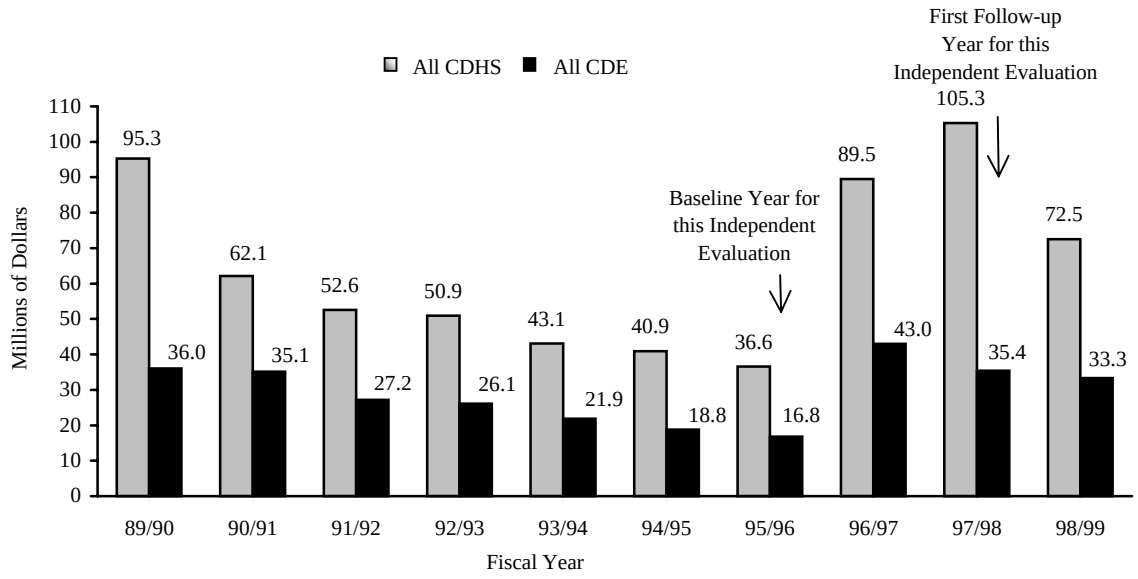
Background

In November 1988, California voters passed Proposition 99, the Tobacco Tax and Health Promotion Act, which established the California Tobacco Control Program (TCP). This referendum increased the state cigarette tax from 10 to 35 cents per pack, added a proportional tax increase on other tobacco products, and earmarked the new revenues for tobacco control, medical care, and research activities. It launched one of the largest public health interventions of its kind ever initiated, nationally or internationally.

Funds for the California TCP are appropriated from the Health Education account of the Tobacco Products Surtax Fund. The Health Education account is one of six accounts to which tobacco tax revenues are allocated annually. The Tobacco Tax and Health Promotion Act specified that the Health Education Account was to be allocated a 20% share of tobacco tax revenues. The remaining funds were allocated to hospital services (35%), physician services (10%), research (5%), public resources (5%), and a legislative discretionary fund (25%).

The TCP is administered by the California Department of Health Services, Tobacco Control Section (CDHS/TCS) and the California Department of Education (CDE). Figure 1-1 shows the amount of funding allocated to CDHS and CDE for the Tobacco Control Program from fiscal years 1989-90 to 1998-99. Total funding for the TCP has fluctuated considerably over the ten-year program period. From the first to the seventh year of the program, there was a 60% reduction in total funding (from $131.3 million in 1989/90 to $53.4 million in 1995/96). From 1995/96 to 1997/98, total funding more than doubled (from $53.4 million to $140.7 million), however it declined again in 1998/99 (to $105.8 million).

FIGURE 1-1
Proposition 99 Health Education Account Appropriations for Tobacco Control Programs, 1989-99



Source: California Department of Health Services, 1999

The baseline year for this Independent Evaluation assessed tobacco control activities during fiscal years 1994/95 and 1995/96, which represented the lowest points in tobacco control program funding levels since the inception of the program. The second wave of data collection for the Independent Evaluation, which is described in this report, assessed tobacco control activities during 1996/97 and 1997/98, when total funding had increased to levels close to the allocations in the first year of the program.

California Tobacco Control Program Model

The primary goals of the California TCP are: (1) to reduce tobacco use among adults and youth; and (2) to reduce exposure to environmental tobacco smoke (ETS). The program initially drew upon the National Cancer Institute's *Standards for Comprehensive Smoking Prevention and Control* (USDHS, 1990), which suggest that the most effective tobacco control program is comprehensive, integrated, and comprised of multiple interventions that address individual, social, and environmental factors that contribute to tobacco use.

Since 1994, the TCP has emphasized changing the broader social environment in which tobacco use occurs (CDHS/TCS, 1998). The focus has been on "denormalizing" or reducing the acceptability of tobacco use in California communities. The three areas of programmatic focus for denormalization include:

1. Countering pro-tobacco influences in the community;
2. Reducing exposure to environmental tobacco smoke (ETS); and
3. Reducing youth access to tobacco through retail and social sources.

In 1996, CDHS/TCS identified countering pro-tobacco influences as having the highest priority for the 1996/97 and 1997/98 fiscal years. In addition to the three priority areas, the program also supports certain cessation services for cigarette smokers and users of other forms of tobacco.

Interventions include a broad range of programmatic activities designed to support the three priority areas. Examples of interventions that CDHS/TCS encouraged local communities and grantees to implement during the 1996-97 fiscal year include the following (CDHS/TCS, 1996):

Counter Pro-Tobacco Influences

- Mobilize community support for policies that decrease exposure to tobacco advertising, promotions, and sponsorships
- Create support to implement and enforce existing laws that will decrease youth exposure to tobacco advertising and promotions, through community education, media, and providing training to enforcement agencies
- Conduct educational campaigns that target youth and expose the manipulation of youth by the tobacco industry
- Create campaigns to educate the public to counter tobacco industry messages (e.g., that tobacco products are not addictive)

Reduce Exposure to ETS

- Expand worksite policies to increase smoking restrictions indoors and outdoors
- Create support for implementation and enforcement of state and local clean indoor air laws through community education, advertising, public relations, and training of enforcement agencies
- Increase the number of families that voluntarily establish smoke-free homes and vehicles

Reduce Youth Access to Tobacco

- Create support among local governments for policies to eliminate illegal tobacco sales
- Create support for enforcement of existing state, local, and tribal laws to reduce youth access
- Provide merchant education, public relations, and media campaigns to eliminate illegal tobacco sales to minors
- Create educational and media campaigns that address social sources of tobacco

Facilitate Cessation

- Provide cessation services for smokers and chewers through a statewide multilingual counseling program
- Provide cessation classes through local health departments
- Provide technical assistance to Medi-Cal managed care organizations and health maintenance organizations to make changes at the system level that enable provision of cessation services to enrollees

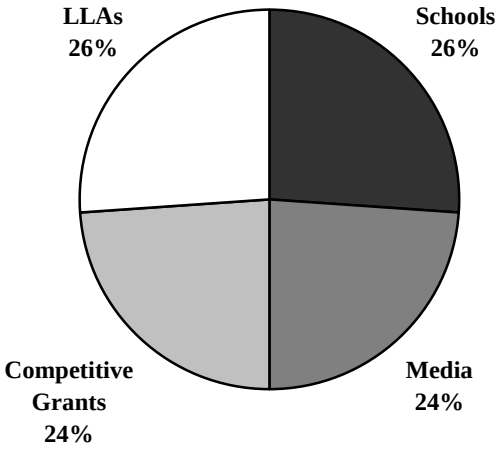
California Tobacco Control Program Components

Primary components of the California Tobacco Control Program include:

- Local Programs (Local Lead Agencies and Competitive Grantees),
- Statewide Mass Media Campaign, and
- School-based Tobacco Use Prevention Education (TUPE) Program.

Figure 1-2 shows the proportion of the budget in fiscal year 1997-98 that was appropriated for each of these program components.

Figure 1-2
Budget Appropriations for Tobacco Control Program Components, FY 1997-98



Source: California Department of Health Services, 1999

Local Programs are administered by Local Lead Agencies (LLAs) and community-based organizations that are awarded competitive grants. The 58 county health departments and three city health departments in the state serve as Local Lead Agencies for tobacco control. These agencies implement a broad range of community- and environmental-level interventions, coordinate local tobacco control activities, and provide technical assistance on program planning. The competitive grants program provides funding to community-based organizations for prevention projects that build on existing community resources. The competitive grants program also provides funds to established networks of agencies that serve each of the four largest ethnic groups in California (African Americans, Hispanics, Asian/Pacific Islanders, and American Indians), and it funds 11 regional community linkage projects that organize local governments and community-based organizations to work outside their geographic boundaries on tobacco control initiatives.

The ***Statewide Mass Media Campaign*** consists of outdoor advertising, print media, and paid advertisements on radio and television. The campaign is designed to:

- Frame and support the issues upon which local community programs act;
- Keep tobacco at the forefront of the public's awareness;
- Communicate the seriousness of tobacco use to the public;
- Reduce the social acceptability of tobacco use in California; and
- Publicize toll-free numbers for tobacco cessation and reporting illegal sales to youth.

There is also a public relations component of the campaign that assists local programs in their media advocacy efforts, and supports linkages between local program activities and the statewide media campaign (CDHS/TCS, 1998).

The ***School-based Tobacco Use Prevention Education (TUPE) Program*** provides funding for local educational agencies to implement tobacco prevention, education, and cessation programs for youth. Components include entitlements for in-school tobacco prevention programs for students in grades four through eight, competitive grants for tobacco prevention and cessation for students in grades nine through twelve, competitive grants for innovative projects, and funding to county offices of education for technical assistance to school districts.

Since the 1994/95 school year, the TUPE program has been based on the Guidelines for *School Health Programs to Prevent Tobacco Use and Addiction*, developed by the Centers for Disease Control and Prevention (1994). The guidelines include the following:

1. Develop and enforce a school policy on tobacco use.
2. Provide instruction about the negative physiologic and social consequences of tobacco use, social influences on tobacco use, peer norms regarding tobacco use, and refusal skills.
3. Provide tobacco use introduction in kindergarten through 12th grade. The instruction should be especially intensive in junior high/middle school and should be reinforced in high school.
4. Provide program-specific training for teachers.
5. Involve parents or families in support of school-based tobacco use prevention programs.
6. Support cessation efforts among students and all staff who use tobacco.
7. Assess the tobacco use prevention program at regular intervals.

Overview of This Independent Evaluation

The Independent Evaluation is conducted by a consortium of organizations, including the Gallup Organization, the Stanford University Center for Research in Disease Prevention, and the University of Southern California Institute for Health Promotion and Disease Prevention. The Independent Evaluation is separate from ongoing surveillance activities that monitor tobacco-related behaviors and attitudes among adults and youth and per capita cigarette consumption in California.

The overall purpose of the evaluation is to assess the effectiveness of tobacco control activities conducted through community programs, schools, and the statewide media campaign. The evaluation is designed to help CDHS and CDE allocate resources and adjust programmatic guidelines so as to accomplish the goals of the California Tobacco Control Program. The Independent Evaluation:

- Provides an accounting of the use of TCP funds by describing Proposition 99-funded community programs, media and public relations efforts, and school-based programs;
- Assesses the combined (overall) and independent effects of community program efforts, the statewide media campaign, and school-based programs on intermediate and ultimate TCP outcomes; and
- Monitors changes in the tobacco industry's advertising and promotional activities in California.

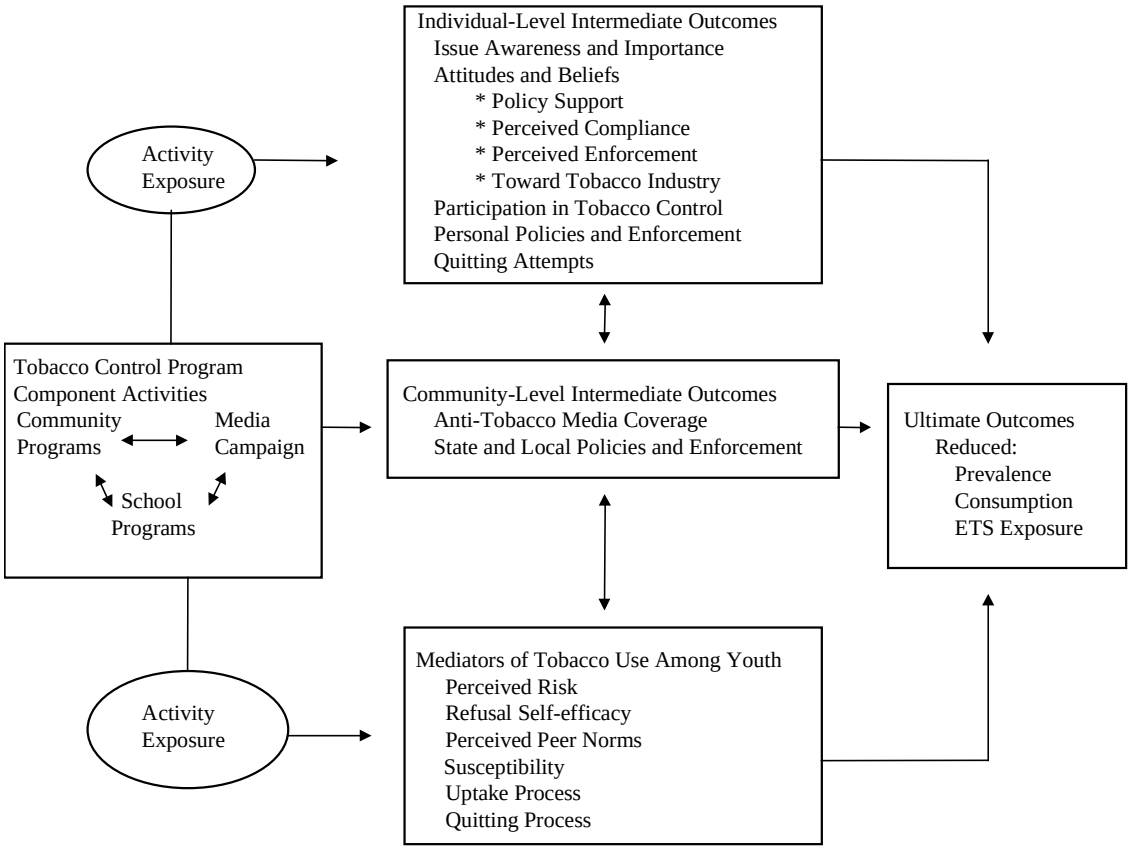
The evaluation is a longitudinal study that includes three waves of data collection, separated by 18-month intervals (see Table 1-1). The subject of this report is the second wave of data collection, which took place from March to July, 1998 and focused on tobacco control activities during 1997 and 1998.

Table 1-1
Independent Evaluation Design

	Wave 1 (Baseline)	Wave 2	Wave 3
When conducted	October 1996 – February 1997	March 1998 – July 1998	October 1999 – February 2000
Program period addressed	1995 – 1996	1997 – 1998	1998 – 1999

The conceptual framework for the Independent Evaluation is illustrated in Figure 1-2. This figure shows a simplified view of the presumed relationships among TCP activities, intermediate outcomes, and ultimate outcomes. TCP activities are conducted through local programs, the statewide media campaign, and schools. Program activities are directed towards social norm changes (i.e., intermediate outcomes) at the individual level and community level. School-based programs are directed toward changing tobacco use mediators such as perceived risk, refusal skills, and susceptibility. It is presumed that, over time, changes in intermediate outcomes will affect ultimate outcomes (i.e., reduced tobacco use prevalence, consumption, and ETS exposure).

FIGURE 1-3
Conceptual Framework for the Independent Evaluation



The evaluation focuses on 18 counties ("focal" counties) that were selected to represent California's 58 counties. The focal counties were selected from four strata, which are referred to in this report as Media Markets, High-Density, Medium-Density, and Low-Density counties. Multiple data collection methods were used to examine program activities and outcomes in these focal counties. Table 1-2 summarizes the methods. (See the Appendix for a description of the sampling scheme, data collection methods, and analytic approach).

Table 1-2
Independent Evaluation Data Collection Methods, Wave 2

Data Source	No. of Respondents	Response Rate	Component Addressed
Program Input Measures			
Project Directors	137*	90%	C
TUPE Coordinators	76	84%	S
School Administrators	188	91%	S
Teachers (5th-, 8th-, and 10th-grade)	443 (on site) 151 (by mail)	90% (on site) 43% (by mail)	S
TCP budget appropriations	n/a	n/a	C, M, S
Media campaign spots, dissemination schedules, and financial statements	N/a	n/a	M
Program Outcome Measures			
Adults (CATI)	8,122	58%**, 95%***	C, M
5th-grade Youth	3,065	97%	C, M, S
8th-grade Youth	5,457	97%	C, M, S
10th-grade Youth (Comprehensive High Schools)	8,226	97%	C, M, S
Continuation High School Youth (grades 9-12)	1,120	98%	S
Opinion Leaders (CATI)	503	69%	C, M
ETS Enforcement Agencies	241	80%	C
Youth Access Enforcement Agencies	182	81%	C
Local policy database from Americans Nonsmokers Rights Foundation	n/a	n/a	C

n/a = not applicable
C = Community; M = Media; S = Schools
* Of these, 83 reported doing work in at least one of the focal evaluation counties. Only these 83 are included in Wave 2 analyses.
** Cooperation rate
*** Completion rate of those successfully screened and eligible

Overview of This Report

This report provides a synopsis of the major findings of the second wave of the Independent Evaluation. It describes TCP activities, changes in program outcomes from the first to second waves of data collection (1996 to 1998), and relationships between exposure to program activities and outcomes. It is organized as follows:

- Chapter 2 — The tobacco marketing environment in California
- Chapter 3 — Local programs findings related to Countering Pro-Tobacco Influences, Reducing ETS, and Reducing Youth Access to Tobacco
- Chapter 4 — Statewide media campaign findings
- Chapter 5 — School-based Tobacco Use Prevention Education Program findings
- Chapter 6 — Overall impacts of the California Tobacco Control Program

A companion document, the *Independent Evaluation Technical Report, Wave 2*, provides more detailed information about evaluation methods and materials. The Technical Report is available under separate cover from CDHS/TCS.

CHAPTER 2

THE TOBACCO MARKETING ENVIRONMENT IN CALIFORNIA

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THE TOBACCO MARKETING ENVIRONMENT IN CALIFORNIA

Tobacco Marketing as a Cultural Tradition

Tobacco has been aggressively marketed since the 1880's (Pierce and Gilpin, 1995), and in recent years has been one of the most heavily promoted commercial products in the United States. In 1997, the tobacco industry spent $5.66 billion on cigarette advertising and promotions (FTC, 1999), through retail outlets, print media, outdoor signage, sports sponsorship, brand merchandise distributions, and more. Advertising campaigns have been strategically designed to improve brand visibility, to associate tobacco with positive symbols such as emancipation and freedom of speech, and to create doubt about the medical consensus regarding tobacco risks (Ernster, 1985; Pollay, 1990). Despite competition for brand share, the various tobacco campaigns work together to create acceptance of cigarettes as a normal and desirable part of our culture.

Tobacco Marketing in California

The California Tobacco Control Program (TCP) has designed media and local program efforts to make Californians more aware of the tobacco industry's influence and to denormalize tobacco use, through a series of anti-tobacco messages and programs. This chapter describes the pro-tobacco environment in California, as a way to help shape anti-industry interventions that are timely, strategically placed, and appropriate, and to better understand the forces working in opposition to the messages of the California TCP.

In this chapter we report on the advertising and promotional practices of the tobacco industry in California. Observations of billboards, transit displays, public events, magazines, newspapers, bars and clubs, brand merchandise catalogues and direct mail campaigns were made by the Tobacco Industry Monitoring Evaluation (TIME) at the University of Southern California. Observations of retail advertising and incentives were made by the Stanford Center for Research on Disease Prevention.

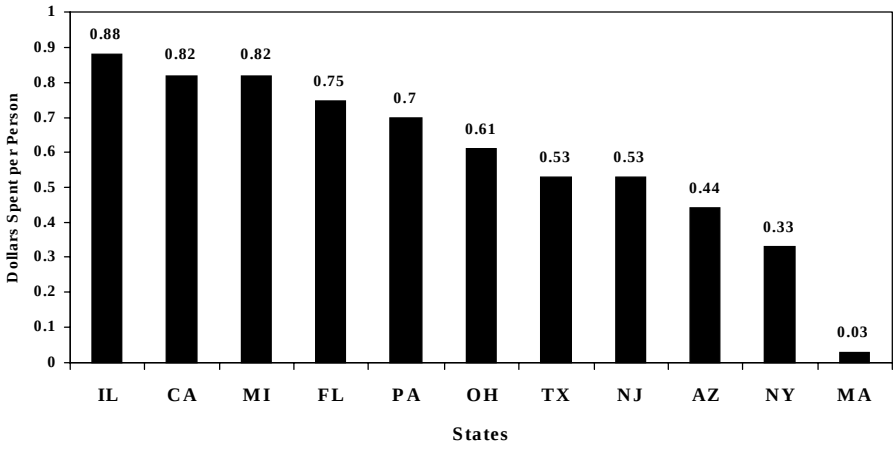
Outdoor Advertising

Billboards

Outdoor tobacco advertising has been declining in California. Expenditures for tobacco advertising through billboards in California dropped from $1.04 spent per person in 1995, to $0.82 per person in 1997. Similar drops were observed in 10 comparison states (see Figure 2-1). In trade reports of tobacco outdoor expenditures during 1997, California ranked second highest among 11 states, the same ranking it held in 1995. More was spent per person in California than in most comparable states, but the drop was 20% from the previous year.[1]

The U.S. cigarette manufacturers eliminated all cigarette advertising on billboards beginning in April 1999 in compliance with a provision of the Master Settlement Agreement signed by the Attorney General of California. Billboards may still appear for cigar products and for the small tobacco companies that did not participate in the agreement.

Figure 2-1. Tobacco Billboard Expenditures During 1997 in Eleven States

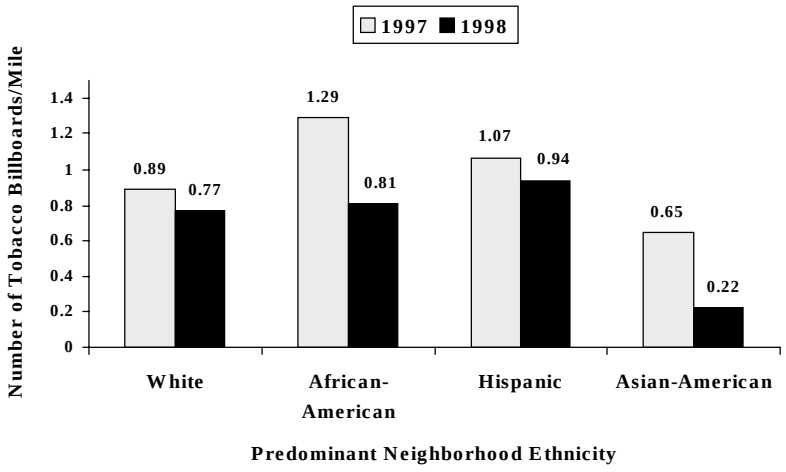


Source: Competitive Media Reports, 1997; U.S. Census Bureau, 1997

The density and concentration of tobacco billboards has also been declining in California. In 1997 and 1998, we monitored billboards in eight counties in California.[2] Of the 1,104 billboards observed in 1998, there were 74 (6.7%) that were pro-tobacco.

Tobacco billboard density, presented in Figure 2-2, represents the number of pro-tobacco billboards per mile. From 1997 to 1998, there was a decrease from .98 tobacco billboards per mile to .78 per mile. In 1998, tobacco billboards appeared to be slightly denser in Hispanic neighborhoods, however, the differences between ethnic neighborhoods were not statistically significant.

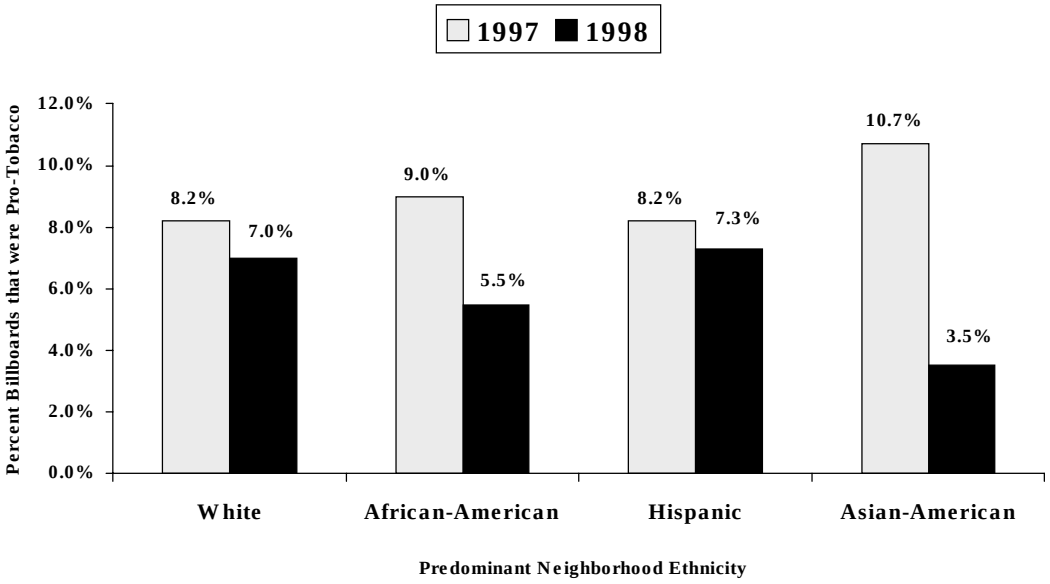
Figure 2-2. Tobacco Billboard Density



Source: TIME Billboard Data, 1996-1998, n=44 neighborhoods

Billboard density for all kinds of products may be higher in some neighborhoods due to zoning and socioeconomic conditions. For that reason, we also examined tobacco billboard concentration, which is the percentage of all billboards that are used to advertise tobacco (see Figure 2-3). Tobacco billboard concentration declined significantly from 8.5% of all billboards in 1997 to 6.7% in 1998 ($p<.05$). In 1998, it was slightly higher in predominantly Hispanic and White neighborhoods than in Asian American neighborhoods. However, the differences between these neighborhoods were not statistically significant.

Figure 2-3. Tobacco Billboard Concentration



Source: TIME Billboard Data, 1997-1998, n=44 neighborhoods

Among the pro-tobacco billboards, the most prevalent sponsors were:

- GPC (17%)
- Camel/Kamel (16%)
- Marlboro (16%)
- Winston (7%)
- Newport (6%)

The predominant billboard brand varied by predominant neighborhood ethnicity:

- White neighborhoods – Camel (with campaigns for "What you're looking for" and "Mighty Tasty")
- African American neighborhoods – Newport (with a campaign for "pleasure")
- Hispanic neighborhoods – GPC (with a simple ad featuring the package)
- Asian American neighborhoods – GPC (with a simple ad featuring the package)

About one-half the billboards (49%) featured a format with photographs of people. Of these, 45% were ads with White models and 29% were ads with African American models. The rest could not be coded for ethnicity (e.g., the face was covered). This prevalence of African American models is much higher than their proportion in the population.

Two companies owned most of the billboards structures leased to tobacco companies. The main operators were:

- Eller (36%)
- Outdoor (40%)
- Metropolitan (9%)

In 1998, there was a law in effect in California that prohibited tobacco ads on billboards within 1,000 feet of any public or private elementary school, junior high school, or high school, and any public playground. **Nevertheless, during that year one-third of the tobacco billboards in our study were within 1000 feet of schools or playgrounds.**[3] Of these, 40% were for GPC cigarettes. This figure has declined from the 49% observed to be in violation in 1997, but it is still high. This problem was resolved when tobacco billboards were removed in April 1999 in compliance with the Master Settlement Agreement.

Transit Advertising - Buses and Cabs

In some states, such as New York and Massachusetts, taxicabs have been a prominent source of tobacco advertising exposure, with small tents perched on cab roofs. In 1999, at each of the 44 billboard study areas, we monitored all taxicabs and buses that passed by during a 15-minute period (n=71 buses; 25 taxicabs). We observed bus shelters or "kiosks" (n=35) at these sites as well, to explore the prevalence of outdoor transit-related tobacco advertising. We found no tobacco ads in bus shelters or on buses. They appeared on taxicabs, but only in one location, San Francisco, where 25% of the taxicabs had tobacco ads. Ads on cabs may have been emerging in San Francisco, but should be eliminated by the Master Settlement Agreement.

Events Sponsorship

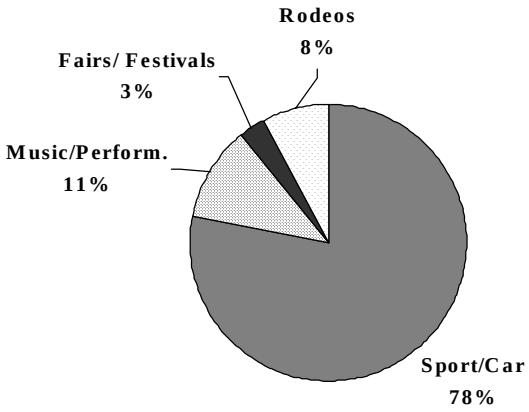
Events sponsorship has emerged, in the last seven years, as a powerful marketing tool for the tobacco companies. In 1998, a three-tiered approach was used to gather data on events sponsorship in California. The first tier involved identifying all tobacco-sponsored events in the state (a census). Tier two was a survey of all large public events (tobacco-sponsored and non-tobacco sponsored) held between May and September, 1998, in 18 counties in California. This second tier was designed to determine the percentage of events with some type of tobacco marketing or advertising (a prevalence survey) and to compare features of tobacco-sponsored events with those of non-sponsored events in the same sample. Tier three involved observations of a small sample of tobacco-sponsored events in California, with one observation from each major sponsorship series, to learn about the types of tobacco promotional activities present at these events.[4]

<u>In the 1998 statewide census of tobacco-sponsored events</u>, 267 events were identified. The most common type of event with tobacco marketing was in the category of car/sports competitions (see Figure 2-4).

The predominant events sponsors were:

- Winston (59% of tobacco-sponsored events; most were car races)
- Kodiak Tobacco (12%; all were fishing derbies)
- Philip Morris (11%; most were ballet performances)
- Copenhagen-Skoal (9%; most were rodeos)

Figure 2-4. Types of Tobacco-Sponsored Events Held During 1998 in California



Source: TIME Statewide Census of Tobacco Events, 1988, n=267 Events

Almost all of these events were part of tours or series that traveled throughout California or nationwide. Examples of nationwide sponsorship contracts include:

- Rodeos with support from the Skoal-sponsored Professional Rodeo Cowboy Association
- Winston-sponsored NASCAR racing series, racetracks, teams, and prizes
- The American Ballet sponsored by Philip Morris
- Small bass fishing contests sponsored by Kodiak Tobacco
- The George Strait Music Festival sponsored by Copenhagen

A pre-event phone call to each of the 267 event coordinators revealed the following planned activities:

- 34% of events had a permanent tobacco sign such as a billboard
- 25% had a tobacco ad in the event program
- 21% had temporary tobacco signage
- 5% had a booth or table with tobacco products or related merchandise

In 1999, this profile may change, as permanent tobacco signs are removed under the conditions of the Master Settlement Agreement. In 1998 and previous years, tobacco marketing at events could be a simple form of paid advertising, such as a tobacco billboard at a ballpark. In the future, events marketing will be primarily in the form of sponsorship contracts, such as Copenhagen-Skoal's support for the Professional Rodeo Cowboy Association rodeos held throughout California. Sponsorships are typically more complex and involve greater marketing opportunities.

In the phone survey of large public events in 18 counties, the prevalence of events with some kind of tobacco marketing declined from 15% of all events in 1996 to 10% of all events in 1998 (see Table 2-1).

Table 2-1.
Prevalence and Audience Size of Tobacco Supported Events, May through September, 1996 and 1998

Year	No. of Events	% With Tobacco Support	Median Audience Size	
			Tobacco - Supported Events	Non-Tobacco Events
1996	697	15%	33,000	12,500
1998	673	10%	80,000	9,000

Source: TIME Event Surveys in 18 Focal Counties, May-September, 1996 & 1998

Tobacco-supported events tended to draw larger audiences than non-tobacco events. The median audience size at events with tobacco marketing in 1998 was 80,000 people, compared to a median audience size of 9,000 people at events without tobacco marketing.

In May through September, 1998, in the 18 focal counties, most rodeos (86%) had tobacco marketing, while only one-third (31%) of sports and car events had this kind of tobacco presence. Less than one in ten (8%) of fairs and festivals, and only 1% of music and performance events had tobacco support. Exhibits at museums had no tobacco support during this time.

In the 20 events observed by TIME staff, tobacco marketing strategies were quite varied. At one extreme, there were large race car events with tobacco brand signs and scoreboards, banners, sampling and brand merchandise booths, tobacco ads in event programs, tobacco brand race car teams and logos on cars, plastic sacks to carry brand merchandise or samples, and more. At the other extreme, there were events with no tobacco advertising visible to the public, such as ballet performances with tobacco corporation donations.

The profile of event marketing in California may change with enactment of the Master Settlement Agreement, which limits tobacco corporations to one brand-name sponsorship contract after existing contracts end, and which prohibits permanent tobacco brand billboards in arenas. Sponsorships under corporate names are not limited. These restrictions may lead to more corporate sponsorships under names like Philip Morris and US Tobacco, and to consolidation of multiple event contracts into large, complex national contracts like the Winston NASCAR series. This last type of national contract provides opportunities for Winston to promote its sponsorship through racing events, arenas, racing teams, prizes, web-sites, printed event programs, magazines, t-shirts, direct mail, televised segments of the races, and more. A shift in the contracts from the local or regional level to the national level may reduce the influence that local tobacco control programs can exert over event sponsorship. It may change the nature of events sponsorship in California so that more national contracts are established, but it will not eliminate tobacco sponsorship, and may not even reduce it.

Magazines

Several types of magazines were surveyed in 1998: seven local California magazines, such as *Los Angeles Magazine*, previously monitored in 1996, and 18 national magazines with high California readership, such as *People* and *Rolling Stone*.[5]

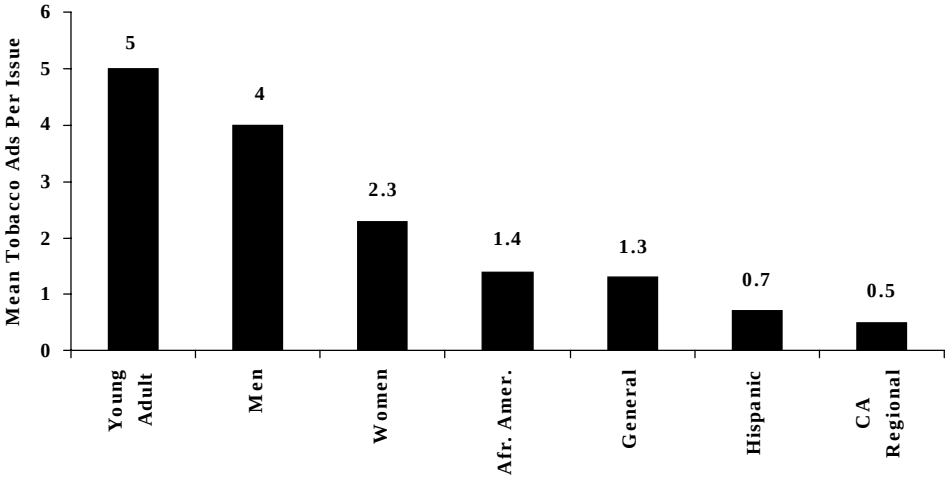
Local California magazines carried relatively little tobacco advertising, with a mean of slightly less than one tobacco ad per issue.

- Most of the tobacco ads were for cigarette brands, of which Marlboro and Winston were the most commonly advertised in 1998.
- The number of tobacco ads per issue in local magazines decreased from .9 per issue in 1996 (out of 41 issues) to .6 per issue in 1998 (out of 74 issues).

Tobacco advertising prevalence is relatively high in national magazines with large California readership, about 2.3 pro-tobacco ads per issue. The mean number of tobacco ads per issue varied by type of magazine, as shown in Figure 2-5.

- Magazines aimed at young adults and men had significantly more tobacco ads than magazines aimed at women, African Americans, Hispanics, the general audience, or local geographic regions in California ($p<.05$).
- The women's magazines included Better Homes and Gardens, which contained no tobacco advertising. If that publication is removed from the analysis, there were 3.1 tobacco ads per issue in the three remaining women's magazines.

Figure 2-5. Tobacco Ads in Magazines, by Type of Magazine Audience



Source: TIME Magazine Data, 1996-1998, n=260 issues from 25 magazines

The national magazines with the highest proportion of teen readers have the highest mean number of tobacco ads per issue (see Table 2-2).[6]

TABLE 2-2
Mean Number of Tobacco Ads Per Issue in National Magazines With Over Ten Percent Youth Readership

Magazine	California Circulation	Audience Focus	% Readers Age 12-17	Mean # of Tobacco Ads/Issue
Spin	58,372	Young Adult Entertainment	32	5.0
Rolling Stone	160,663	Young Adult Entertainment	20	5.0
Sports Illustrated	315,000	Men's Sports	18	3.4
Jet	66,302	African American	16	0.9
Ebony	129,627	African American	13	2.5
Field and Stream	103,000	Men's Sports	11	6.0

Source: TIME Project National Magazine data, 1998, n=18 publications, 186 issues.

Models in magazine tobacco ads tended to reflect the age and ethnicity of the intended audiences:

- General audience magazines featured predominantly 18- to 49-year-old, White, male models.
- Young adult magazines featured predominantly mixed gender groups, with mostly White, 18- to 29-year-old models.
- Men's magazines had models who were predominantly male, White, and 30 to 49 years of age.
- Women's magazines had models who were predominantly female, White, and 18 to 29 years of age.
- African American magazines had ads with both male and female models, who were predominantly African American and almost entirely in the 18- to 29 year-old group.
- Hispanic magazines had models that did not have a predominant gender group, but the largest proportion of models appeared to be White and 18 to 29 years old.

The major brands advertised in each type of magazine were as follows:

- Youth Entertainment Magazines - Camel/Kamel, Kool, Winston
- General News & Entertainment - Marlboro, Basic, Benson & Hedges
- Women's Magazines - Virginia Slims, Camel/Kamel, Marlboro
- Men's Magazines - Marlboro, Basic, Rooster
- African American Magazines - Newport, Kool, Misty
- Hispanic Magazines - Marlboro, Virginia Slims, Philip Morris

Magazines provide an opportunity for high concentrations of narrowly targeted tobacco advertising. Several campaigns, such as Winston's “No Bull,” and Camel's "What You're Looking For" ads, seemed aimed at an independent, young adult audience. They are witty and humorous ads that involve the reader in trying to figure out portions of the intended message or imagery. A few campaigns, including Camel's “Mighty Tasty” and Kamel's “Commando" themes, appear to be designed for teenage audiences, with real people impersonating cartoon characters like Flash Gordon and Fred Flintstone.

These results suggest magazine advertising is often placed and designed to appeal to youth. The Master Settlement Agreement is supposed to restrict tobacco advertising in magazines with substantial youth readership. However, the minimum percentage of youth readers has yet to be defined.

Cigar Events

From January 1996 through December 1998, we examined trends in cigar marketing and promotional practices in California and other states by monitoring two cigar magazines. *Cigar Aficionado* promotes cigar use as a socially popular behavior of the elite, sophisticated and affluent individual through high-class images and celebrity endorsements. *Smoke* is another popular cigar lifestyle magazine that appears to target a younger, trendier group of cigar smokers.

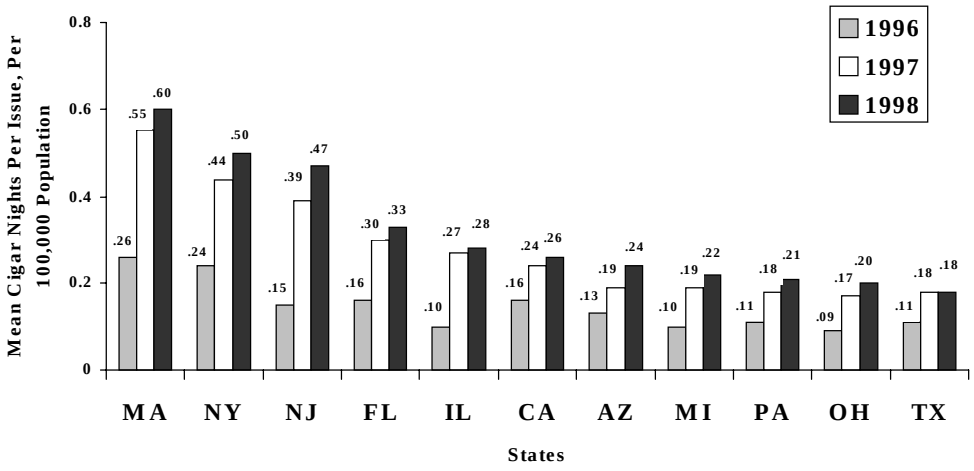
Smoker Nights

One type of promotional activity that has emerged in recent years is the cigar "smoker night." This type of event is sponsored by a restaurant or cigar club, and features a selection of cigars, wines, entertainment and/or celebrity guests. These events are listed in a section of *Cigar Afficionado* that looks like the classified ads, with simple text listing the establishment and contact person. There is an Editor's Note, in boldface, at the beginning of the California section warning: "As of January 1, California smoking laws have been changed. Contact the establishment to confirm its smoking status."

Between 1996 and 1998, there was a 60% increase in the mean number of California cigar smoker nights listed in each issue in the "smoker nights" calendar section of *Cigar Aficionado* (see Figure 2-6).

- In 1998, most of these listings were in Los Angeles, followed by San Francisco and San Diego.
- There were about .26 cigar nights per 100,000 people in California (per issue).
- When ranked with "smoker night" listings per 100,000 people for the eight other most populous states in the United States, and two states with statewide tobacco control programs (Massachusetts and Arizona), California was right in the middle. Massachusetts had the most, followed by New York.

Figure 2-6. Cigar "Smoker Nights" Listed in Cigar Afficionado for Eleven States



Source: TIME Magazine Data, n=7 quarterly (1996-97) and 6 bi-monthly (1998) issues of Cigar Afficionado

There is declining interest among customers in cigar smoker nights. In December 1998 and January 1999, a telephone survey of employees or owners of 22 establishments randomly selected from the 85 California "Smoker Nights" list revealed:

- Few smoker night events had been held since January 1998.
- Only 50% of the survey sample reported that their establishment had held a "smoker night" event at least once in 1998.

- Of the establishments that had held "smoker night" events since the new law went into effect, 60% reported they did not plan to hold another event due to a decline in customer interest that they attributed to the law.
- Comments from respondents included "ever since we have had to hold events outside, we have lost 80% of our clientele," and "since the new law, cigar smoking is not the rage it once was."

This survey suggests there are far fewer smoker nights in California than are listed in *Cigar Afficionado.*

Cigar Expos

Another strategy used to promote cigar consumption is large-scale expos (expositions). These cigar industry-sponsored events are usually hosted by prominent celebrities and are held at restaurants, clubs, casinos and convention centers. Such events are described as "cigar galas that celebrate the finest life has to offer", including premium cigars, gourmet dining and the finest wines and spirits.

We monitored the number of cigar expos advertised per year in *Cigar Aficionado* and *Smoke* magazines. Full-page advertisements in these magazines publicized tobacco-sponsored events and expos in California and other states. We found:

- In 1998, the number of cigar expos dropped to one advertised in San Francisco, down from a high of 11 advertised during 1997.
- A drop in the number of expos between 1997 and 1998 also occurred in eight of our 10 comparison states.

The data suggest that these types of cigar events may be declining nationwide.

The Master Settlement Agreement does not place restrictions on cigar events. It would appear that the application of AB 13 to bars and clubs, as of January 1998, has limited this type of tobacco promotion.

Newspapers

From January 1997 to June 1998, we systematically reviewed 33 California newspapers from the 18 focal counties in California.[7] Comparisons are made to data collected from these same newspapers in 1996.

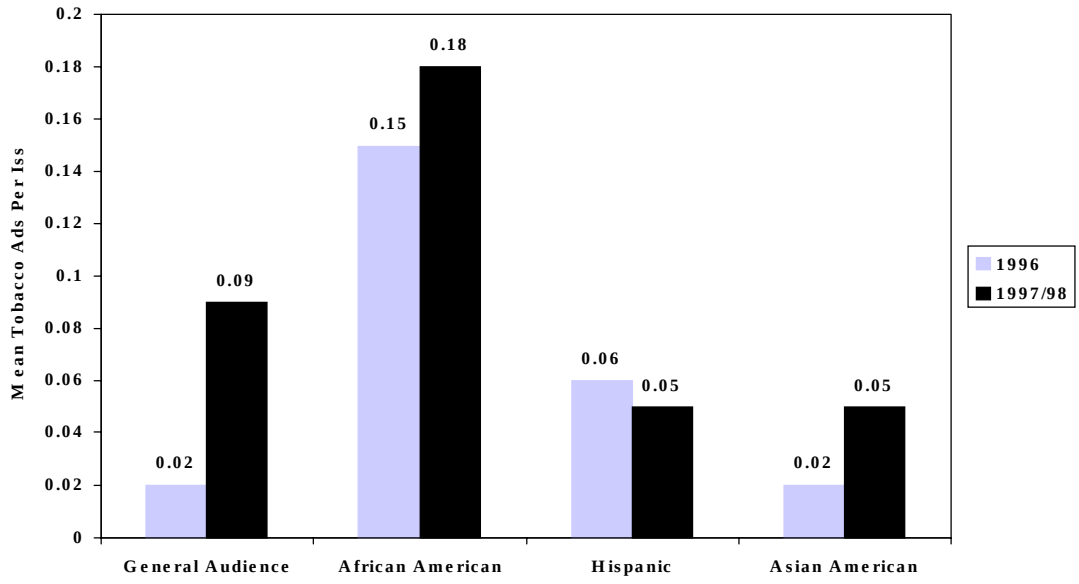
Pro-tobacco advertising has increased in California newspapers, from a mean of .11 ads per issue in 1996, to .27 in 1997/98. These ads were of the following types:

- tobacco brands (40% of tobacco ads)
- tobacco-sponsored events or bar and club nights (32%)
- cigars, cigar accessories, cigar shops, or cigarette shops (24%)
- tobacco corporate messages (5%)

Since 1996, tobacco ads have increased the most in weekly entertainment newspapers (the local, free "independent" newspapers), followed by the more "news" oriented general audience, Asian American and African American newspapers (all p's<.05; see Figure 2-7).

From January 1997 through June 1998, the mean number of tobacco ads per issue was highest in entertainment newspapers (4.4 ads per issue) and African American newspapers (.18 ads per issue). Each of these types of publications had significantly more tobacco ads than general audience (.09 ads per issue), Hispanic, and Asian American newspapers (both .05 ads per issue) (all p's<.05).

Figure 2-7. Tobacco Ads in General and Ethnic Audience Newspapers



Source: TIME Newspaper Data, 1996-1998, n=7,322 from 30 publications

General Audience Newspapers, January 1997 – June 1998

- There were 312 tobacco ads in 3,328 issues from 15 publications (.09/issue).
- Most tobacco ads (75%) were less than one page in size.
- Almost half (46%) were for tobacco brands or cigars/cigar accessories/cigar shops or tobacco shops (45%). Only 8% were for tobacco-sponsored events or bar and club nights.
- Leading ad sponsors were various cigar brands (29%), Benson and Hedges (16%), and "GPC" (7%).
- Most (87%) used graphics and text without pictures of people.
- Of the 13% of tobacco ads with models or pictures of people, most (75%) had White models, 11% had African American models, and 9% had groups of mixed ethnicity.

Asian American Newspapers, January 1997 – June 1998

- There were 42 tobacco ads in 834 issues from 5 publications (.05/issue).
- Most of these publications had few or no tobacco ads. Almost all tobacco ads (88%) were for the Payless Cigarettes and Cigars store, in *Nguoi Viet Daily*. These ads were small (less than one-quarter page) with text in a box, rather than pictures or models. The second most common ad was for Mild 7 cigarettes (8% of tobacco ads).

African American Newspapers, January 1998 – June 1998

- There were 68 tobacco ads in 373 issues from 4 publications (.18/issue).
- Most tobacco ads (90%) were less than one page in size.
- Most (74%) were for tobacco industry corporate promotional messages, and 19% were for tobacco-sponsored events or bar and club nights.
- Leading sponsors were Philip Morris (40% of ads), Brown and Williamson (24%), Benson and Hedges (21%) and RJ Reynolds (10%).
- In ads with models (62% of all tobacco ads), less than half (42%) had African American models, and the remaining ads had people whose ethnicity could not be identified (e.g., face was hidden).

Hispanic Newspapers, January 1997 – June 1998

- There were 29 tobacco ads in 591 issues from 6 publications (.05/issue).
- Most tobacco ads (72%) were less than one page in size.
- Most ads (66%) were for corporate promotional messages, while another 31% were for tobacco brands.
- Leading sponsors were Philip Morris (57%), Marlboro (24%) and Benson and Hedges (10%).
- In ads with models (66% of all tobacco ads), 10% had White models, 10% had Hispanic models, and the rest (80%) could not be coded for ethnicity.

The majority of tobacco ads in African American and Hispanic newspapers were corporate promotional messages from Philip Morris (45%), Brown and Williamson (16%), and RJ Reynolds (9%), with messages such as:

- "It takes teamwork to prevent cigarette sales to minors" (Philip Morris)
- "The Black Press – A Force in the Fight for Equality" (Philip Morris)
- "Arts Against Hunger. The Ailey [dance troupe] and you help fight hunger in L.A" (Philip Morris)
- "The Ultimate Achievement" featuring a diploma and hands being shaken, with text discussing support for the United Negro College Fund and the National Hispanic Scholarship Fund (Brown and Williamson)
- "We Don't Want Kids To Smoke. Under 18 We Card" (RJ Reynolds)
- "Big Taxes, Big Government. There They Go Again" (Spanish version, by Philip Morris; English version by Philip Morris, RJ Reynolds, Brown & Williamson, and Lorillard jointly)

The most prevalent corporate messages (38% of all tobacco ads in African American and Hispanic newspapers) were discussions about youth access, suggesting the need to stop tobacco sales to minors. These corporate messages provided positive community images of the tobacco industry and anti-government messages aimed predominantly at ethnic communities. They also make the corporate names more widely known, for future community marketing efforts like events sponsorship.

Weekly Entertainment Newspapers, January 1997 – June 1998

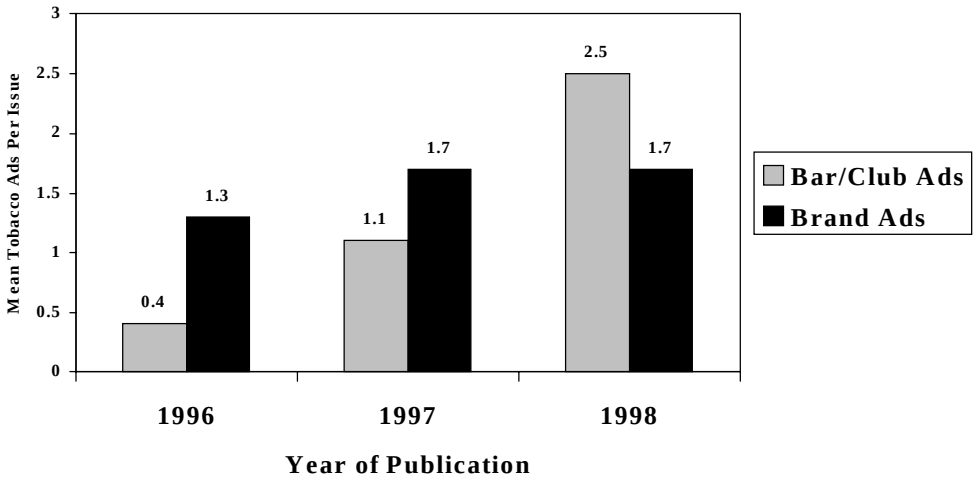
- There were 981 tobacco ads in 225 issues from 3 publications (4.36 per issue)[8].
- Most (56%) were one or two full pages in size.
- Leading sponsors were Marlboro (21%), Lucky Strike (17%), Camel (16%) and Red Kamel (16%).
- About 42% were for tobacco brand products, 42% were for tobacco-sponsored events or bars and club nights, and 16% were for cigars, cigar shops or tobacco stores.
- When models were featured (40% of ads), most ads had models who were White (71%) or had groups with mixed ethnicity (17%).

In general, there are few restrictions in the Master Settlement Agreement that affect tobacco advertising in newspapers. It has been a very small part of overall advertising expenditures for tobacco corporations in the past. However, it appears to have increased since 1996, due largely to an increase in tobacco-sponsored bar and club advertisements in weekly entertainment newspapers.

Bar and Club Nights

Tobacco-sponsored bar and club nights are being heavily advertised in weekly entertainment newspapers in large cities, and this has increased since 1996. This type of marketing effort continues despite California's restrictions on smoking in bars and clubs. Indeed, these marketing efforts were relatively minor until shortly before the advent of the bar restrictions. The mean number of ads per issue for cigarette and smokeless tobacco brands reached a high point in 1997, then declined slightly in 1998 (see Figure 2-8). However, advertisements for tobacco-sponsored bars and clubs steadily increased during this same time period.[8]

Figure 2-8. Tobacco Brand and Bar Advertisements in Weekly Urban Entertainment Newspapers



Source: TIME Newspaper Data, 1996-1998, n=78 issues from 3 publications

The advertisements for bar and club promotions were based in the major metropolitan areas of Los Angeles, San Francisco, San Jose, San Diego and Orange County. Samples of entertainment newspapers were reviewed from five other major California cities in 1997, but tobacco bar nights were not advertised in those publications. In the Los Angeles area, in 1998, the following campaigns were typical:

- ***Lucky Strike*** - "An American Original," listing the most bars (a mean of 35 bars and clubs per ad) and some featured events, typically in a busy and entertaining two-page format with one-quarter page devoted to a Lucky Strike tobacco ad
- ***Camel*** - "Camel Page - Your Guide to Urban Nightlife," listing a mean of 20 bars and clubs per ad, usually in a busy format similar to the Lucky Strike pages
- ***Marlboro*** - "When the Sun Goes Down the Night Starts Up," "Come to Where the Flavor Is," "The Night's Wide Open," "Come Along for the Ride," etc., listing a mean of 20 bars and clubs per ad and often featuring little else
- ***Virginia Slims*** - "Dueling Divas," listing four to five bars and clubs at which women bands would compete, and sometimes a local charitable organization which would receive a portion of the proceeds (Los Angeles only)

There were also less frequent bar promotional ads, sponsored by Kool and Skoal ("Skoal Music").

Events were also featured in some of these bar and club ads, usually by Lucky Strike or Camel. These included an Import Auto Show in Orange County (which attracted primarily young Asian males), gay fashion shows, art exhibits, beach volleyball, and Halloween attractions. The Dueling Divas band competitions were major attractions that filled clubs to capacity.

Tobacco-sponsored promotions help bar and club owners advertise their businesses, while linking tobacco and evening entertainment for young adults. IE staff visited 20 of these bars and clubs, and observed the following:

- Most of the businesses had tobacco promotional items, such as matches and napkins with the brand logo or name.
- Ashtrays with tobacco brand logos were often present, but in almost all cases in 1998, smoking was limited to outdoor locations.
- On weekends, there were teams of young staff, such as "Lucky Strike Girls," who passed out free cigarettes and other brand merchandise. These teams "club hopped," so they were usually at one of the listed bars for just a short time on a weekend night.
- When there were special promotions, such as the Dueling Divas or the Kool Car Simulator at a sports bar, the brand promotional staff were present for the whole evening, and provided information, encouraged participation, and often passed out free cigarettes.
- When promotions involved an activity, such as voting for a band or signing up for a contest, the patron's name and address were usually collected by the brand promotional staff.
- The tobacco-sponsored bar and club nights were usually held in adult-only locations where alcohol was served, though some clubs allowed people aged 18 to 20 to attend also. Facilities with adjoining restaurants sometimes had younger patrons able to observe the promotion. Not all bars or promotional staff checked ID before allowing people to enter the facility, or before getting patrons to complete survey forms or offering gifts or tobacco. In lieu of ID, the promotional staff would often require proof the participant was a smoker (i.e., could produce a pack of cigarettes) before giving away free gifts.

Tobacco-sponsored bar and club nights have not abated despite the application of AB 13 to bars and clubs, nor do they face any restrictions from the Master Settlement Agreement. Rather, this form of tobacco marketing is proliferating in California. In our review of single issues of weekly entertainment newspapers from eight comparable states in the U.S., it is clear that the tobacco-sponsored bar and club phenomenon is flourishing in major urban centers throughout the U.S. This strategy targets young adults, enlists more people for mailing lists, and may enlist establishment owners' support for overturning indoor smoking restrictions.

Tobacco Use in Movies

Tobacco portrayals in films and television were not monitored by the Independent Evaluation. However, they are a visible part of the social environment in California, so we have included results from a recent study of this issue. According to a study of 35 leading films between 1990 and 1996, depictions of cigarette and cigar use in movies is increasing, and the prevalence of smoking in films is discordant with the much lower levels of smoking in the general population (Stockwell and Glantz, 1997). Most portrayals of smokers are of successful White males, though women are increasingly shown as smokers. In this study, 80% of male and 27% of female lead characters smoked, and the proportion of smoking portrayals that involved major characters increased from 38% in the 1960's to 51% in the 1990's. There does not appear to be a pattern of one brand being promoted over others, but cigars are prominent, appearing in 34% of the scenes that involve tobacco use in 1996. The increasing presence of tobacco in major films is another way in which tobacco use is being portrayed as a normal and desirable part of our culture.

Retail Outlets

According to the 1999 Federal Trade Commission Report to Congress, the tobacco industry spent 48.5% of its $5.66 billion dollar marketing budget in 1997 to advertise and promote the sale of its products in stores (FTC, 1999). It is clear that tobacco companies are using stores as a dominant venue for its pro-smoking messages. The California TCP identified advertising in retail outlets as an important priority in 1994 and brought national attention to this issue when the results of the Operation Storefront survey, conducted by over 700 volunteers, were released in 1995.

Tobacco Advertising in Stores

In Spring 1999, the Stanford Center for Research in Disease Prevention completed surveys of 582 randomly selected stores in California to assess the amount and type of tobacco advertising in stores. The surveys were conducted by trained adult data collectors who counted the number of signs, functional items such as clocks and change trays, and displays by brand and company. Information was also obtained about signs relating to illegal sales of tobacco to minors. The counting protocols used in this survey differ significantly from those used in Operation Storefront, so the results presented here cannot be compared to those from earlier surveys.

These surveys demonstrate that retail advertising of tobacco products is very high, with an average of 17.1 signs, functional items, and displays per store (see Table 2-3). The rates in liquor stores are far higher, with an average of 28.1 per store. Almost half the stores have ads that are at or under three feet from the floor, so they are highly visible to young children.

- **The average number of signs, functional items and displays per store was 17.1. Liquor stores had the most with an average of 28.1 per store, while supermarkets had the lowest with 9.1 on average.**
- Pharmacies had the lowest number of signs and functional items with an average of 6.6, but they had the highest average number of displays at 6.7 per store. The displays included both self-service and plexi-packs in which products are encased in plastic, so are inaccessible. (Data collectors reported anecdotally that cigarette displays were frequently placed within close proximity to nicotine patch displays.)
- **Almost half (48%) of the stores in the sample had ads below three feet; 77% of liquor stores had tobacco ads below three feet, while less than 10% of the pharmacies had tobacco ads placed below three feet.** These ads are most visible to young children.

TABLE 2-3
Tobacco Advertisements by Store Type

Store Type	No. of Stores	Ads at or Below 3 Feet Present	Mean Number of Signs and Displays		
			Signs & Functional Items[a]	Displays & Plexipacks[b]	Total
Convenience	(n=148)	41%	10.6	5.1	15.7
Gas Only	(n=53)	30	7.5	2.4	9.8
Liquor Store	(n=112)	77	21.8	6.3	28.1
Pharmacy	(n=45)	9	6.6	6.7	13.2
Small Market	(n=161)	59	14.3	3.2	17.5
Supermarket	(n=63)	25	8.1	1.0	9.1
Total	(n=582)	48	12.9	4.2	17.1

a. Functional items include but not limited to, tobacco clocks, change trays, and floor mats
b. Plexi-packs are displays in which products are encased in plastic, so are inaccessible

Marlboro dominates the retail environment. An investigation of advertising items (signs, functional items and displays) by brand indicates that Marlboro dominates the retail environment with an average of 5 items per store (see Table 2-4). Camel lags behind with an average of only 2 ads per store.

TABLE 2-4
Mean Number of Advertisements per Store by Brand

	Signs & Functional Items[a]	Displays & Plexipacks[b]	Total
Camel	2.1	0.6	2.7
GPC	0.9	0.4	1.3
Marlboro	4.5	0.5	5.1
Newport	0.7	0.3	0.9
Winston	0.8	0.5	1.3
Other brands	3.9	2.2	6.1

a. Functional items include but not limited to: clocks, change trays, and floor mats
b. Plexi-packs are displays in which products are encased in plastic, so are inaccessible

Other findings of interest that are not displayed in the tables are:

- **Only 53% of all the stores displayed "1-800-5-ASK 4 ID" STAKE Act signs**. Gas stations had the highest rate of compliance at 67%, while only 38% of pharmacies displayed STAKE Act signs.
- Joe Camel ads are still in 3% of the stores, even though ads with cartoons are no longer allowed under the provisions of the Master Settlement Agreement. Ads with cartoons were most commonly observed in liquor stores (6%). None of the gas stations or pharmacies had cartoon ads.

Tobacco Company Incentives for Retailers

Tobacco companies provide financial incentives such as money, free or discounted products to encourage retailers to carry their products, to display them in prime locations and to prominently display their advertising. These strategies are used by many other manufactures and companies to motivate retailers to create in-store merchandising environments that maximize sales of their products.

While anecdotes abound about the amount of money retailers receive from tobacco companies, little scientific data are available on retailer incentive programs. Given the magnitude of tobacco marketing expenditures in the retail outlet, the Stanford Center for Research in Disease Prevention conducted a study in Spring 1999, to find out about the types and amounts of incentives received by California tobacco retailers compared to those received for two other commonly sold products: soda and chips. In Spring 1999, telephone interviews were completed with a random sample of owners or managers in 202 small retail outlets in California.[9]

With regard to incentives received:

- 58.1% of stores reported that they had received incentives (e.g., money, free or discounted products) from tobacco companies in the last 3 months. This far exceeds those who receive incentives from soda (36%) or candy (14.5%). ($p < .01$)
- Of the stores that reported having received money as an incentive, more stores received it from tobacco companies, and the payments far exceeded those of the other product types. In the last quarter: 73 stores reported an average of $578 from tobacco companies; 22 stores reported an average of $380 from soda companies; and 8 stores reported an average of $284 from chip companies.

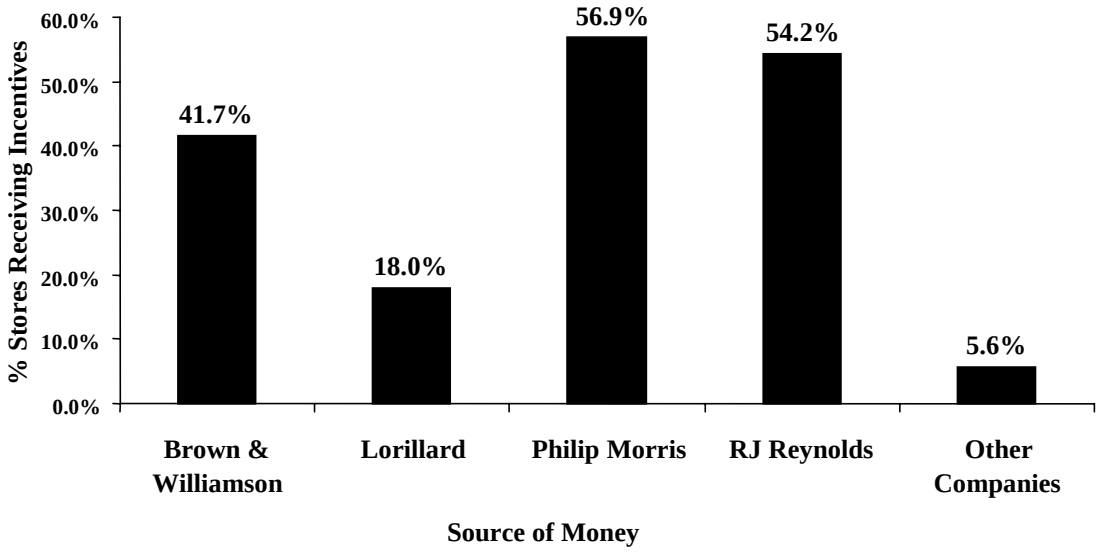
It is often argued that self-service displays offer greater opportunities for youth access to tobacco because illegal sales are more likely to occur or because theft of the product is easier. The results of the current survey provide a clear indication that when cigarettes are placed behind the counter, the dollar amount lost to theft is significantly lower ($p<.01$).

With regard to the placement of products and their experiences with shoplifting:

- All stores were asked about the placement of tobacco products in their stores. Interestingly, 71% of the stores reported that tobacco products were kept behind the counter, only 29% said that tobacco products were available via self-service displays.
- Stores were asked about the value of the amount of product that is shoplifted in a typical month. Of the stores that sold all 3 product types and responded to the question (n=179): tobacco was the highest with about $51 dollars worth of product stolen every month compared to chips at $35 per month and soda at about $24 per month. These amounts differed significantly across all product type categories at $p < .01$.
- The results about tobacco theft changed dramatically when analyzed in relation to placement. **Stores that keep tobacco products behind the counter report an average of $29 of product shoplifted in a typical month compared to $102 dollars worth of product in stores with self-service displays**.

Of the stores that received incentive money from tobacco companies and identified the source (n=72), more stores received money from Philip Morris (57%), RJ Reynolds (54%), and Brown and Williamson (41%) than from other tobacco companies. Of the stores that reported having an exclusive contract with a single tobacco company, 55% reported that they had one with Philip Morris (n = 52), compared to 25% with RJ Reynolds (n = 23), and 18% with Brown & Williamson (n = 17) (See Figure 2-9).

Figure 2-9. Source of Money Among Stores Receiving Tobacco Incentives



Tobacco Promotional Flyers

There are a variety of tobacco brand catalogues, brand flyers, contest offers and other printed promotional materials available free in retail outlets. These same materials are often sent directly to brand customers through direct mail promotions. Direct mail has been used additionally for surveys of brand customers, political campaigning, and distribution of coupons and thank you letters. These two sources are reported separately below. [10]

Convenience Store Promotional Flyers

In 1998, a total of 204 tobacco brand booklets, catalogues, or other printed promotional materials were collected in convenience stores in eight counties, and coded for content and source.

The most common materials were brand merchandise catalogues from Marlboro, Camel and Winston. As with retail outlet displays, described above, Marlboro is the dominant type of promotional material found in convenience stores. The collected materials included the following titles:

- 56% Marlboro Unlimited (catalogue)
- 15% Party at the Marlboro Ranch (sweepstakes)
- 11% Camel Cash (catalogue)
- 10% Winston No Bull (catalogue)

Of the 204 brand materials coded, none contained cartoon characters. Three-quarters (75%) contained photographs of real people.

- 67% of the materials featured models in groups of three or more people.
- 56% of the materials had male models. Females were portrayed in 11% of the materials, while 33% of the materials contained both male and female models.

All the materials stated that customers must be 21 years of age or older in order to exchange tobacco coupons for brand merchandise, or to participate in a contest. However, it would not be difficult for younger people to order direct mail merchandise. They can collect coupons from other smokers among their friends or family. They need only sign a statement on the order form that they are old enough. Furthermore, teens would not need to use a credit card or checking account, since 69% of the order forms waived shipping and handling costs.

Direct Mail

A total of 49 booklets, catalogues, and other printed promotional materials were collected through direct mail, and coded for content and source.

The most common title among the direct mail materials was related to Proposition 10, a ballot measure taxing tobacco, in the 1998 California elections. The remaining materials were for brand marketing:

- 20% Cigarette Tax (Proposition 10 campaign literature)
- 12% Marlboro 'You Get A Lot to Like' (catalogue)
- 10% Basic 'Keep It Basic' (catalogue)
- 8% Marlboro Country (catalogue)
- 6% Winston 'No Bull' (catalogue)

One-third of the materials contained photographs of real people. Of those with people featured:

- 62% of the materials featured models in groups of three or more people.
- 50% of the materials had female models only. Males only were portrayed in 38% of the materials, and 12% of the materials contained both male and female models.

Similar to the brand merchandise materials collected in stores, 87% of the direct mail order forms waived shipping and handling costs.

This form of marketing through the mail is not expected to change significantly after the Master Settlement Agreement is enacted. Customers will be required to provide a copy of a driver's license verifying age, but there is no way of verifying if the photocopy belongs to the customer. The number of "sign-up" opportunities observed through bars and clubs, events, retail outlets and brand merchandise catalogues suggests the tobacco companies are trying to enlist as many smokers as possible in a direct mail relationship. These relationships can be used for surveys, political messages, and brand marketing. There are few provisions in the Master Settlement Agreement that will curtail delivery of these messages to families in California.

Summary

There will be few restrictions of tobacco promotions with the advent of the Master Settlement Agreement. Tobacco ads will no longer be permitted on billboards, but this type of marketing has been declining for several years and has represented only a small proportion of tobacco advertising expenditures. Advertisements in newspapers are relatively sparse, but increasing, and they are starting to proliferate in weekly entertainment newspapers. Magazines continue to carry tobacco advertising, with the highest rates in publications that appeal to youth. The number of large public events with tobacco marketing may have declined recently, but tobacco corporations may simply be shifting these funds away from advertising signage at multiple arenas toward national sponsorship contracts that present more opportunities to involve audiences, and fewer opportunities for local interventions. Tobacco sponsorship of bars and clubs is increasing, and is untouched by the Settlement. Retail outlet advertising is widespread, and supported by substantial incentives from tobacco brand distributors. Most of the marketing efforts described in this chapter provide opportunities to sign up smokers for direct mail campaigns, which in turn are used to promote brand products and lobby for political support. It does not appear that the Settlement has provided a setback for the tobacco industry in its efforts to market its products.

CHAPTER 3

LOCAL TOBACCO CONTROL PROGRAMS

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LOCAL TOBACCO CONTROL PROGRAMS

The California TCP funds local governmental agencies and community-based organizations to conduct programs designed to change the social environment regarding tobacco use.

In 1998, the TCP funded 152 local community agencies throughout the state, including:

- 61 local health departments, designated as Local Lead Agencies (LLAs) funded to create local tobacco control coalitions and implement a local comprehensive tobacco control plan;
- 11 regional community linkage initiative projects, each encompassing 2 - 14 counties, funded to assist coordinated efforts among the local programs in each region;
- 4 statewide ethnic networks funded to promote and develop programs that serve specific ethnic populations (African American, Native American, Asian and Hispanic); and
- 76 local (city- or county-specific), multi-county, or statewide competitive grantees funded to develop and implement a variety of focused community projects. The number of local competitive grantees in 1998 was twice as many as in 1996.

These agencies develop environmental and community-level objectives that focus on social norm changes within three broad priority areas: countering pro-tobacco influences, reducing exposure to environmental tobacco smoke, and restricting youth access to tobacco products.

Countering pro-tobacco influences (CPTI) activities support efforts to block and restrict specific industry activities related to the advertising and promotion of tobacco that:

- reduce tobacco advertising outdoors and in retail environments;
- restrict tobacco sponsorship of community cultural and entertainment activities;
- reduce the prevalence of smoking on television and in movies; and
- restrict industry activities such as campaign contributions, lobbying, and donations to philanthropic causes.

Protecting people from exposure to environmental tobacco smoke (ETS) includes community activities that:

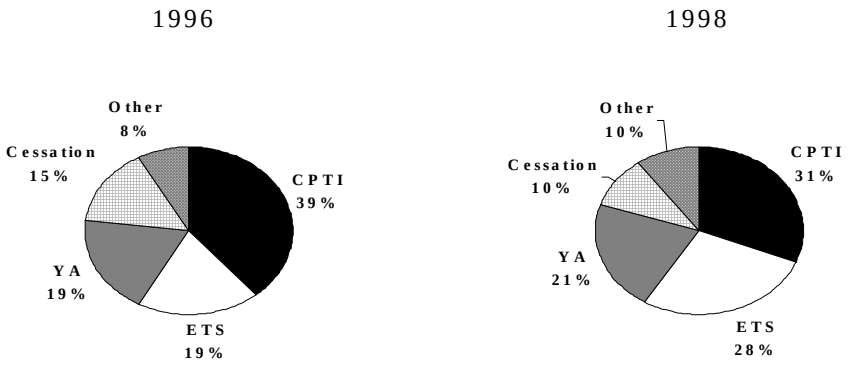
- promote and enforce ordinances that restrict smoking in public places, worksites, and bars;
- encourage the voluntary adoption of smoke-free policies in other public areas such as hotel lobbies, college campuses, and community events; and
- encourage the voluntary adoption of smoke-free home and car policies.

Reducing the availability of tobacco to youth (YA) includes activities that:

- reduce the illegal sales of tobacco products to minors through education of merchants and law enforcement officials;
- increase support for enforcement of youth access laws (e.g., via stings to identify merchants who sell tobacco to minors); and
- address social sources of tobacco by stressing to adults and youth the importance keeping tobacco products out of the hands of youth.

Figure 3-1 displays the average proportion of effort agencies reported spending on TCP priority areas in the evaluation counties in 1996 and 1998. Urban and rural agencies did not differ in the average effort allocated to each priority area. The figure shows some shift between 1996 and 1998 such that CPTI activities received somewhat less attention in 1998 and ETS activities received more attention. In keeping with the TCP focus on activities to denormalize and deglamorize the tobacco industry, however, CPTI activities received the most effort in both 1996 and 1998. In 1998, ETS efforts increased due to the implementation of the statewide smoke-free bar law. Local agencies spent a great deal of effort educating the public and generating support for the law. Of the three TCP priority areas, the least amount of effort was expended on activities to reduce youth access to tobacco products from retail and social sources.

Figure 3-1. Proportion of Effort Spent on Local Community Activities[1]



Source: Progress Report Activity Tracking Data, 1996; Project Director Survey, 1998.

This chapter presents other findings related to TCP local program efforts within each of the program's three priority areas. We describe program efforts, public awareness of these programs, and the relationship between program efforts and changes in key outcomes. We report on local government policy changes and enforcement of policies. We also report data describing important indicators of each priority area (e.g., policy opinions, personal behavior, and attitudes). Where data is available, we present changes in these variables over time between 1996 and 1998.

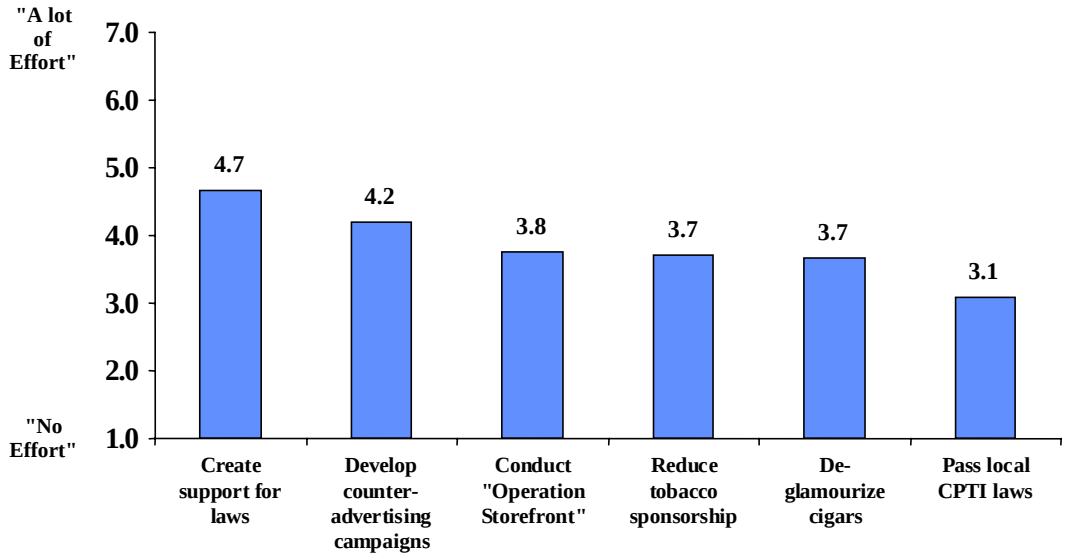
Countering Pro-Tobacco Influences (CPTI)

Program Efforts, Public Awareness, and Association with Change

Local Programs to Counter Pro-Tobacco Influences

As shown in Figure 3-2, TCS-funded local community programs worked on a variety of CPTI activities. The most effort was spent creating support to implement and enforce existing laws and regulations to reduce youth exposure to tobacco advertisements and promotions, and to develop campaigns to counter tobacco marketing and advertising.[1]

Figure 3-2. Project Directors' Reported Efforts to Counter Pro-Tobacco Influences

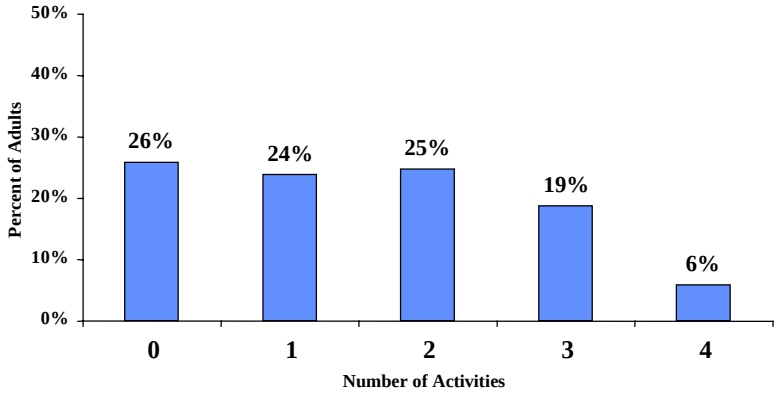


Source: Project Director Survey, 1998

Public Awareness of CPTI Programs[2]

Almost three-quarters of adults (74%) were aware of TCP activities to counter the tobacco industry. In 1998, as shown in Figure 3-3, many adults (50%) were aware of more than one TCP countering activity. Young adults (18-24 years old) and those living in the most rural counties were the least likely to be aware of CPTI activities. Smokers and nonsmokers were equally as likely to have heard of CPTI programs.

Figure 3-3. Adult Exposure to Local Community CPTI Activities



Source: Adult Telephone Survey, 1998

The percentage of adults aware of CPTI programs varied considerably by program activity:

- 55% were aware of efforts to pass local laws to reduce tobacco advertising in stores or on billboards.
- 49% were aware of efforts to reduce tobacco sponsorship of sporting and community events.
- 37% were aware of efforts to make cigars seem less glamorous and cool.
- 15% were aware of Operation Storefront: Youth Fighting Against Tobacco Advertising and Promotions.[3]

Awareness of CPTI activities among youth was low. In 1998, about one-third of 10th-grade youth (32%) had heard of at least one CPTI activity. Females and African Americans were the least likely to be aware of countering activities. Similar to adults, awareness did not differ by smoking status.

Among 10th-grade youth:

- 28% heard of efforts to pass local laws to reduce tobacco advertising in stores or on billboards.
- 13% heard of efforts to reduce tobacco sponsorship of sporting and community events.
- 7% heard of Operation Storefront. [4]

The Relationship between TCP Efforts and CPTI Outcomes

In 1998, the *total* amount of effort that counties put into their CPTI programs was not associated with changes between 1996 and 1998 in CPTI outcomes for adults or youth.[5] *However*, in counties that put more effort into passing local laws to reduce tobacco advertising in stores and on billboards, relative to counties that put less effort in this area:

- Adults were more concerned about the problem of tobacco advertisements in their community (correlation = .46, $p<.10$).
- Adults reported talking more frequently with others about the problem of tobacco advertising and marketing (correlation = .41, $p<.10$).
- Adults supported more strict CPTI policy restrictions (correlation =.59; $p<.05$).
- Adults held more negative views of the tobacco industry (correlation = .61; $p<.01$).

There were no statistically significant associations between county effort and changes in youth outcomes for CPTI.[6]

Policy Activity and Enforcement

In the 1997-1998 evaluation period, there was a significant increase in the initiation and passage of local tobacco advertising and marketing restrictions. Table 3-1 shows the number of provisions related to tobacco advertising restrictions initiated and passed in evaluation county cities. All of the tobacco advertising ordinances have been passed in the media market and high density stratum counties of Los Angeles, San Diego, San Francisco, Alameda, and Contra Costa. **In 1997 and 1998, nine cities and two counties passed 24 advertising restriction provisions that were stricter than statewide codes.** These ordinances include provisions for restricting advertising in areas related to zoning (9 cities, 2 counties), retail outlets (3 cities, 1 county), public transportation (2 cities, 1 county), and tombstone advertising (5 cities, 1 county). Enforcement of CPTI ordinances was not assessed by the Independent Evaluation.

Table 3-1. Number of Local Ordinance Activities to Restrict Tobacco Advertising in Evaluation Counties

	1995-1996		1997-1998	
	Initiated	Passed	Initiated	Passed
Tobacco Advertising Restrictions	9	0	17	24

In 1997-1998, restrictions were passed in Berkeley, Carson, Compton, Covina, Hawthorne, Los Angeles, Oakland, San Diego, San Francisco, Contra Costa County, and Los Angeles County.

Source: American Nonsmokers' Rights Foundation; Project Director Surveys 1996, 1998.

Public Exposure to Tobacco Industry Marketing and Advertising

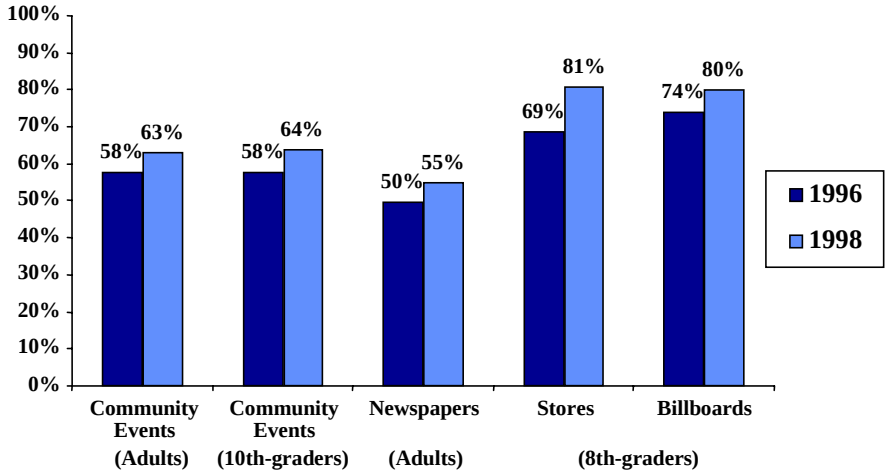
In 1998, tobacco marketing and advertising remained prevalent in communities. For two types of advertising, the percent of adults who reported seeing tobacco advertising "sometimes" or "a lot" was high and did not change from 1996:

- outdoor billboards (76% vs. 74% in 1996).
- televised sporting events (75% vs. 76% in 1996).

There were several instances where significantly more Californians reported seeing tobacco advertisements in 1998 compared to 1996 (see Figure 3-4).

- The percentage of adults who reported seeing tobacco advertising at sporting events, fairs or community events increased from 58% to 63% ($p<.01$); among 10th-grade youth it increased from 58% to 64% ($p<.05$).[7]
- The percentage of adults who reported seeing tobacco advertising in local or national newspapers increased from 50% to 55% ($p<.01$), congruent with findings reported in Chapter 2 indicating that pro-tobacco ads increased in California newspapers between 1996 and 1998.
- The percentage of 8th-grade youth who reported seeing tobacco advertising in stores increased from 69% to 81% ($p<.01$); for tobacco advertising on billboards, it increased from 74% to 80% ($p<.05$).

Figure 3-4. Percentage of Respondents Seeing Significantly More Tobacco Advertising in 1998 than 1996, by Venue



Source: Adult Telephone Survey and Youth School-based Survey, 1996 and 1998

Youth own tobacco promotional items at a higher frequency than adults. In 1998, 39% of 8th-graders and 32% of 10th-graders reported owning one or more promotional items, compared to 19% of adults. The percentage of youth and adults owning promotional items in 1998 did not change significantly from 1996 (8th-graders = 37%; 10th-graders = 37%; adults =19%).

- For 8th and 10th-grade youth, females (vs. males), nonsmokers (vs. smokers), and African Americans (vs. other ethnic groups) were the least likely to own tobacco promotional items.
- While the percentage of 10th-grade youth who reported seeing other kids wear promotional items "sometimes" or "a lot" did not significantly change from 1996 to 1998 (67% vs. 69%), the percentage of youth who said they would wear a tobacco promotional item significantly decreased from 41% in 1996 to 34% in 1998 ($p<.01$).

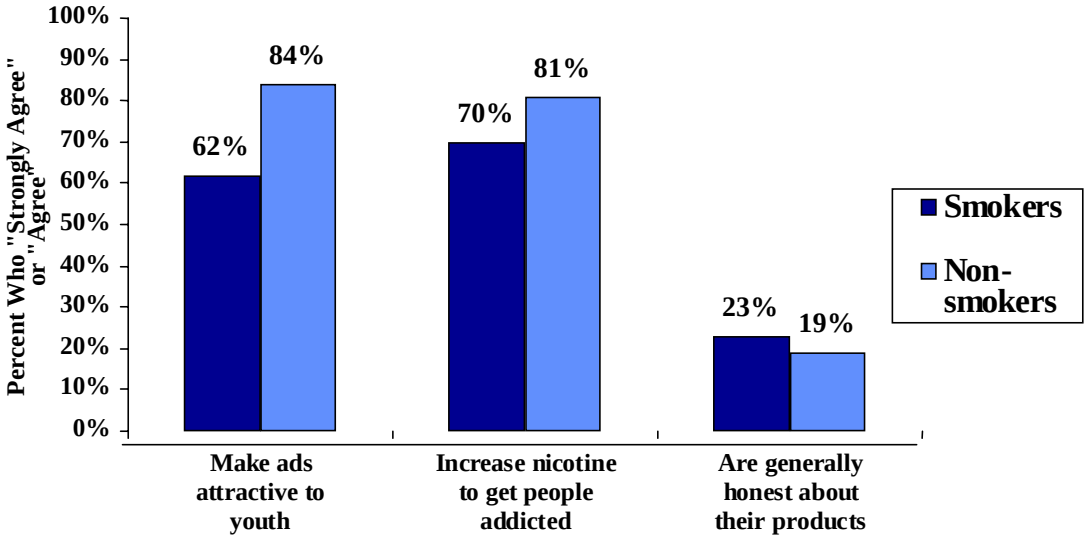
Attitudes and Attitude Changes

The Public's Views about Tobacco Advertising and Marketing

The public is concerned about the amount of tobacco advertising and marketing in their communities. In 1998, one-half of the adults thought that it is a serious problem that tobacco products are advertised in their community.[8] Among youth, from 1996 to 1998, concern about the problem decreased nonsignificantly for 8th-grade youth (from 47% to 44%) and significantly for 10th-grade youth (from 42% to 34%; $p<.05$). Thirty-five percent of adults, 15% of 10th-grade youth, and 20% of 8th-grade youth reported talking with others about the problem of tobacco advertising and marketing.[9] Among adults, females (vs. males), nonsmokers (vs. smokers), and those living in more urban areas (vs. more rural areas) were the most likely to be concerned and talk about tobacco advertising.

The public is skeptical of the tobacco industry's practices. In 1998, most adults thought that tobacco companies try to get youth to start smoking by using advertisements that are attractive to youth (80%), increase nicotine in cigarettes to get people addicted to tobacco (79%), and are generally dishonest in the information that they give the public about their products (80%). Respondents who were female (vs. male), reported higher education (vs. lower education) and higher household income (vs. lower income) were the most likely to hold negative views about the industry. Even among smokers, the proportions who agreed with these attitude statements was high (see Figure 3-5).[10] Almost all opinion leaders (91%) thought that tobacco companies try to get youth to start smoking by using advertisements that are attractive to youth.

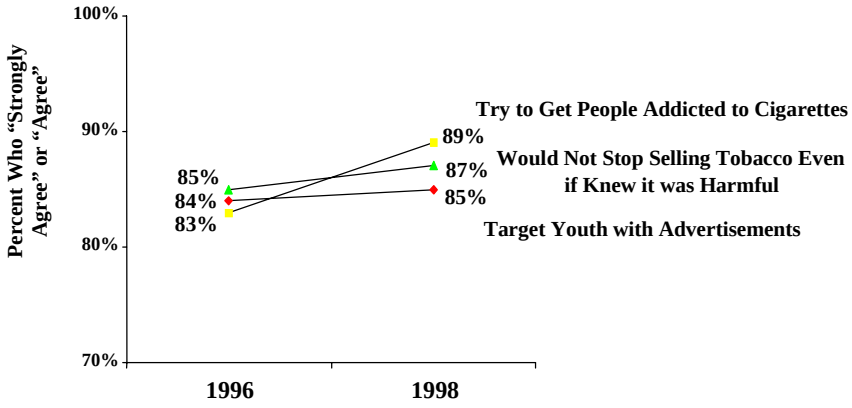
Figure 3-5. Adult Attitudes about the Tobacco Industry



Source: Adult Telephone Survey, 1998

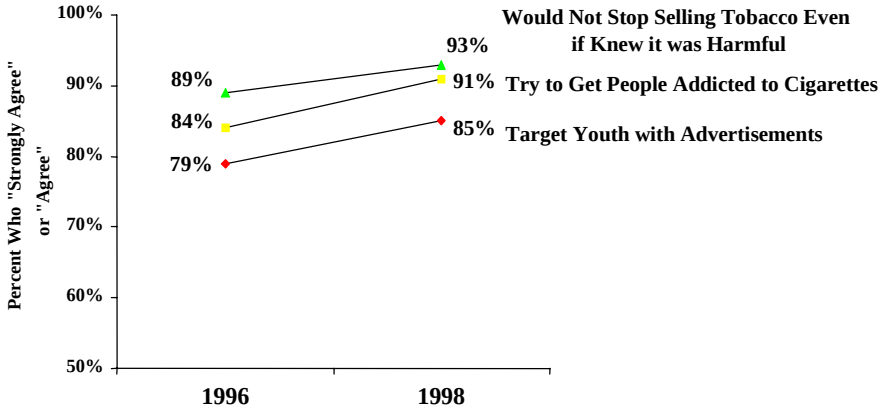
Youths' views about the tobacco industry continue to remain negative. Figures 3-6a and 3-6b show that from 1996 to 1998, there was a significant increase in the percentage of 8th-graders (p=.05) who think that tobacco companies try to get people addicted to tobacco. The figures also show nonsignificant increases in the percentage of 8th- and 10th-graders who think that tobacco companies would not stop selling tobacco even if they knew it was harmful, and that tobacco companies target youth with advertisements.

Figure 3-6a. 8th-Grade Youth Attitudes about the Tobacco Industry



Source: School-based Youth Survey, 1996 and 1998

Figure 3-6b. 10th-Grade Youth Attitudes about the Tobacco Industry



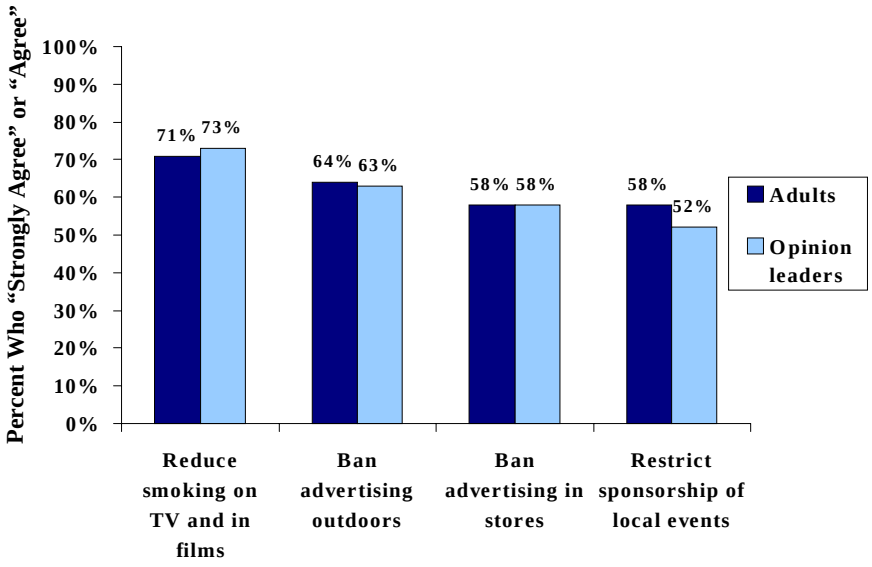
Source: School-based Youth Survey, 1996 and 1998

The public supports restrictions on tobacco advertising and marketing. In 1998, adults and key opinion leaders indicated similar levels of support for restricting the tobacco industry's influence, ranging from 52% of opinion leaders who support restricting tobacco industry sponsorship of local events to over 70% of adults and opinion leaders who support reducing the amount of smoking depicted in TV programs and films[11] (see Figure 3-7). Support for these restrictions did not change significantly from 1996.

Adult respondents who were nonsmokers (vs. smokers), female (vs. male), older (35+ years old) (vs. younger), and reported lower household incomes (vs. higher incomes) were most likely to support restrictions. While overall support for these policies has remained fairly constant from 1996 to 1998, support to ban advertising of tobacco products on outdoor billboards, buses and bus shelters increased significantly from 62% to 65% (p=.05).

Additionally, the majority of opinion leaders thought that policies to reduce pro-tobacco influences were best made at the state or national level (58%) rather than the city or county level.

Figure 3-7. Adult and Opinion Leader Support for Policies to Counter the Tobacco Industry



Source: Adult survey, 1998; Opinion Leader Survey, 1998

Reducing Exposure to Environmental Tobacco Smoke (ETS)

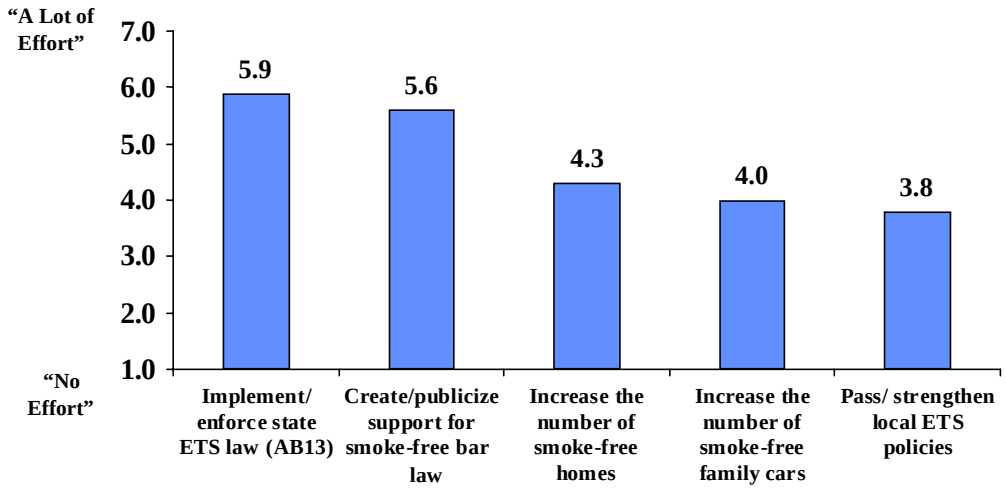
Program Efforts, Public Awareness and Association with Change

Local Programs to Reduce Exposure to ETS

In 1997-1998, local agencies funded by the TCP conducted a variety of programs to reduce residents' exposure to environmental tobacco smoke (ETS). California has been a leader in enacting strong, comprehensive statewide laws to reduce residents' exposure to ETS in a variety of settings. Since 1995, state law has required all restaurants and workplaces with five or more employees to be smoke free. In 1998, the final provision of the state law was implemented, extending the smoke-free ban to bars, nightclubs, lounges, restaurants with bars, and gaming rooms.

Efforts to support the statewide ban on smoking in public places remain a top priority for local tobacco control programs. Figure 3-8 shows the relative effort that agencies devoted to five activities to reduce ETS.[12] The top two activities were implementing/enforcing the state ETS law and creating/publicizing support for smoke-free bars. Agencies reported spending more effort on these two specific activities than on any other activity across all priority areas.

Figure 3-8. Project Directors' Reported Efforts to Reduce ETS



Source: Project Director Survey, 1998

Public Awareness of ETS Programs[13]

Many California residents have heard about efforts to enforce the state ETS laws; fewer have heard about efforts to encourage personal smoking policies for homes and cars, as shown in Table 3-2. Overall, 66% of 10th-graders and 77% of adults had heard of one or more ETS programs. Eighth-graders were asked about their awareness of programs to encourage smoking policies for homes and cars, only. Less than one-half as many 8th- and 10th-graders (15% and 11%, respectively) as adults (31%) were aware of these efforts.[14]

Table 3-2
Exposure to Local Community ETS Programs

		Aware of Programs		
Respondents	No Programs	Efforts on Home/Car Policy	Efforts to Enforce AB 13	Efforts on Home/Car Policy and to Enforce AB 13
8th-Grade Youth	85%	15%	n/a	n/a
10th-Grade Youth	34%	11%	65%	10%
Adults	23%	31%	73%	27%

Note: n/a=question not asked of respondent type

Source: School-based Youth Survey and Adult Telephone Survey, 1998

The groups least likely to have heard of ETS programs included those 18-24 years old (vs. older adults), males (vs. females), and those with a high school degree or below (vs. higher levels of education). Given that these groups tend to have some of the highest rates of smoking suggests that more effort should be spent to reach these groups with the TCP.

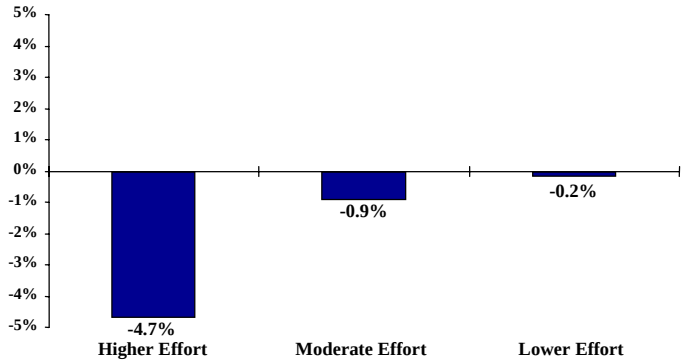
The Relationship Between TCP Efforts and ETS Outcomes

Counties that put the most effort into their ETS programs in 1998 showed the most change between 1996 and 1998 in the two most important ETS outcome variables for adults:

- reducing exposure to ETS at home (correlation = .40 for all adults, p=.10 and .24 for nonsmokers, n.s.).
- reducing exposure to ETS at work (correlation = .60 for all workers, p<.01 and .63 for nonsmokers, p<.01).[15]

Figures 3-9 and 3-10 demonstrate these relationships between effort and outcomes.[16]

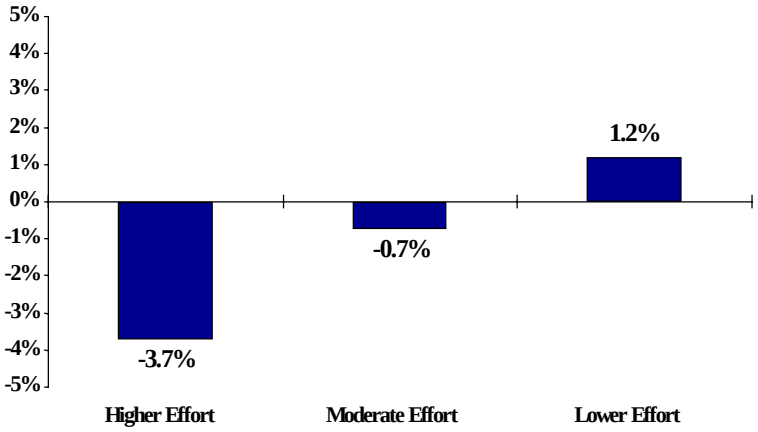
Figure 3-9. Relationship Between County Effort to Increase the Number of Families with Smoke-Free Homes and Percent Change (1996-1998) in Exposure to ETS at Home



Note:
Higher Effort Counties = Lake, Yuba, San Francisco, San Bernardino, Lassen, Fresno
Moderate Effort Counties = Los Angeles, Alameda, Monterey, Plumas , Santa Clara, Orange
Lower Effort Counties = Shasta, Mono, San Mateo, Contra Costa, San Diego, Sacramento

Source: Project Director Survey, 1996 and 1998

Figure 3-10. Relationship Between County Effort to Support and Implement State Laws Restricting Smoking and Percent Change (1996-1998) in Exposure to ETS at Work



Note:
Higher Effort Counties = Lake, Yuba, Mono, Santa Clara, Monterey, San Bernardino
Moderate Effort Counties = San Mateo, San Francisco, Fresno, Lassen, Plumas, Los Angeles
Lower Effort Counties = Contra Costa, San Diego, Sacramento, Alameda, Orange, Shasta

Source: Project Director Survey, 1996 and 1998

Moderately strong relationships were found between county effort on ETS in 1998 and changes between 1996 and 1998 in other important ETS outcome variables. Higher levels of effort were associated with:

- more bans on smoking in cars (correlation = .32 for all adults).
- higher frequency of asking others not to smoke (correlation = .29 for all adults).

The amount of county ETS effort was negatively related to bans on smoking at home (correlation = -.18).[17] The amount of county effort on ETS in 1998 showed fewer relationships to changes between 1996 and 1998 in the major ETS outcomes for 8th and 10th-grade youth. Five ETS outcomes were examined: being exposed to ETS indoors, being exposed to ETS in cars, asking someone not to smoke, being asked not to smoke (smokers only), and believing it is easy to ask a smoker to stop smoking or move away. Two outcomes showed a positive relationship to county ETS effort for 8th-graders,

- asking someone not to smoke (correlation = .25).
- being asked not to smoke (correlation =.29).

For 10th-graders, a negative relationship was found between the amount of county ETS effort and being asked not to smoke (correlation = -.35).

Policy Activity and Enforcement

The number of new local ordinances to restrict indoor smoking and insure clean indoor air in public places has decreased markedly as statewide ETS policies have taken effect. **In 1997 and 1998, three cities in the evaluation counties passed ordinances or amendments to restrict smoking in indoor places that were stricter than statewide codes**. Table 3-3 shows the number of ETS related ordinances initiated by local community projects and the number of ordinances passed during the evaluation periods.

Table 3-3. Number of Local Ordinance Activities to Reduce ETS Evaluation Counties

	1995-1996		1997-1998	
	Initiated	Passed	Initiated	Passed
ETS Restrictions	14	10	11	3

In 1997-1998, restrictions were passed in Costa Mesa, Laguna Hills, and Pasadena.

Source: American Nonsmokers' Rights Foundation; Project Director Surveys 1996, 1998.

ETS local and statewide policies are enforced through activities such as responding to inquiries and complaints, issuing warnings and citations, and conducting compliance checks. Each city designates an agency primarily responsible for carrying out these activities. The types of agencies that enforce ETS policies include county health departments, police and sheriff departments, fire

departments, code enforcement officers, building officials and a number of city administration offices.

In 1998, the majority of designated enforcement agencies reported responding to inquiries (79%) and complaints (76%) about bar ban violations. Table 3-4 presents the percentage of enforcement agencies by evaluation strata that issued warnings and citations, and conducted compliance checks for bars and other workplaces. **Across the four population density strata, the majority of agencies issued warnings to bars but few issued citations. The majority of agencies reported conducting compliance checks of bars except for agencies in the more rural counties**.

Table 3-4. Percent of Agencies Conducting ETS Enforcement Activities by Evaluation Strata

Type of County	Total No. of Jurisdictions in Evaluation Counties[a]	Percent of Designated Agencies Responding to Survey	Percent of Enforcement Agencies					
			Issued Warnings		Issued Citations		Conducted Compliance Checks	
			Bars	Other[b]	Bars	Other[b]	Bars	Other[b]
Media Market	131	64%	50%	44%	23%	12%	57%	51%
High-density	103	83%	62%	55%	21%	15%	67%	58%
Medium-density	45	73%	67%	58%	15%	15%	70%	55%
Low-density	9	44%	50%	75%	25%	0%	25%	50%

a. Includes incorporated and unincorporated areas.
b. Other indoor areas that are covered under AB 13/3037, excluding bars.

Source: ETS Enforcement Agency Survey, 1998.

- On average, agencies that issued citations to bars in the six months since the law went into effect did so about 5.7 times (range = one to 25).
- 60% of issued citations were prosecuted.
- About two-thirds of agencies were involved in efforts to educate others about the smoke free bar law.

Similar to the findings on policy enforcement of AB 13/3037 in 1996, counties in rural areas had the most challenges in enforcing the smoke-free bar law. Enforcement agency officials from these counties reported:

- The lowest levels of perceived compliance of the smoke-free bar law.
- The highest frequency of responding to inquiries and complaints about the smoke-free bar law.
- The highest levels of perceived lack of support among the community and leaders for enforcement of ETS policies.

On the other hand, enforcement agencies in rural counties reported the highest levels of collaboration with other groups and individuals, perhaps a sign of their greater efforts to find a solution to their smoke-free bar law compliance problems.

Enforcement of the smoke-free bar law was higher if the enforcement agency thought ETS enforcement was important and if they collaborated more with other community groups.[18]

- Higher levels of smoke-free bar law enforcement was associated with agencies that reported lower perceived compliance with the smoke-free bar law ($p<.01$), higher perceived importance of enforcing the smoke-free bar law relative to other types of enforcement activities ($p<.05$), and higher levels of collaboration on ETS enforcement activities with other individuals and groups ($p<.01$).
- Agencies who reported higher levels of collaboration were also more likely to have issued citations and prosecuted individuals who violated the smoke-free bar law ($p's<.01$).

Collaboration appears to be an important element for enforcement of AB 13 and it appears to be increasing.

From 1996 to 1998, enforcement agencies increased their collaboration with other individuals and groups to enforce ETS policies ($p<.01$). Eighty-five percent of enforcement agencies collaborated with at least one community group in 1998, compared to 78% in 1996. Enforcement agencies reported collaborating with health departments and local government officials most frequently, followed in order by businesses, voluntary health organizations, tobacco coalitions and educational organizations.

Exposure to ETS in Indoor Settings

The primary ETS-related goal of the California TCP is to reduce people's exposure to ETS. In the 18 months between the survey administered in 1996 and 1998, few statistically significant changes occurred in ETS-related outcomes; however, most changes were in a positive direction.

Adult Exposure to ETS at Home

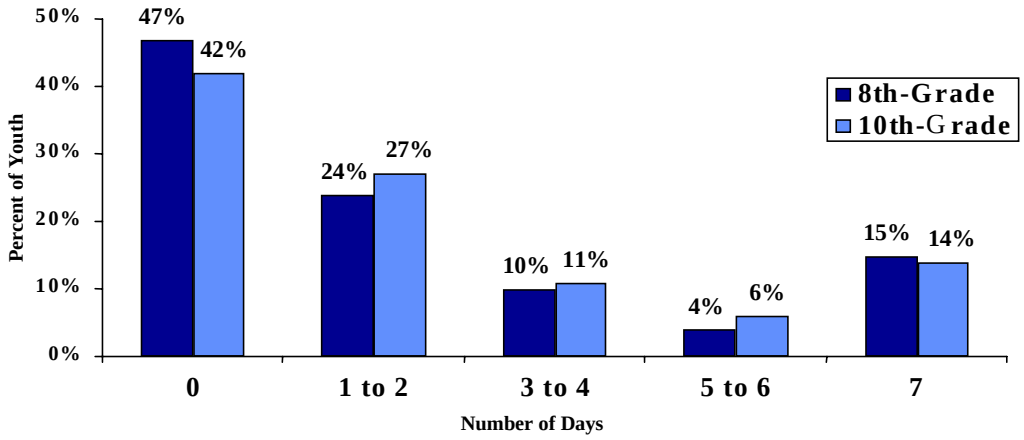
About one-fourth of California adults were exposed to ETS in their homes. In 1996, 24% of California adults were exposed to ETS in their homes; this number decreased nonsignificantly to 22% in 1998. There was a greater reduction in ETS exposure at home among smokers (from 52% to 48%) than nonsmokers (from 18% to 17%), although reductions for both groups were nonsignificant. **Of nonsmoking adults, groups at highest risk for exposure to ETS at home on a daily basis included:**

- **African Americans (vs. other ethnic groups).**
- **18-24 year-olds (vs. older adults).**

Youth Exposure to Indoor ETS

More 10th-graders had been "in the same room with someone who was smoking cigarettes" in 1996 (66%) than in 1998 (58%) (p<.05). This reduction was driven by a decrease in the percent of *nonsmokers* exposed to indoor ETS, from 59% to 51% (p<.05). The percent of 8th-graders reporting exposure to indoor ETS showed no change between 1996 and 1998, remaining at 53%. Despite positive changes, these results indicate that the majority of youth are being exposed to indoor ETS on a regular basis (see Figure 3-11). Data indicate that White 8th- and 10th-graders were at higher risk for exposure to ETS indoors than other ethnic groups, and Hispanics were at lower risk than other ethnic groups.

Figure 3-11. Youth Exposure to Indoor ETS in Past Week

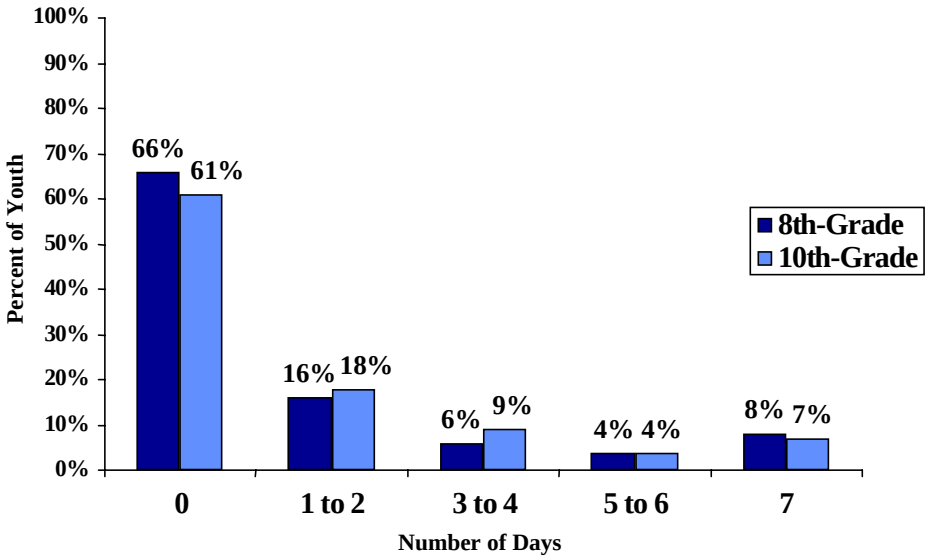


Source: School-based Youth Survey, 1998

Exposure to ETS in Cars

More than one-third of 8th- and 10th-grade youth were exposed to ETS in cars in 1998 (see Figure 3-12). Between 1996 and 1998, the number of youth who were in a car in the past week with someone who was smoking decreased from 44% to 39% for 10th-graders ($p<.01$), but did not decrease significantly for 8th-graders (from 35% to 34%). Subgroup analyses show that **African American youth are at higher risk for exposure to ETS in cars than other ethnic groups**.

Figure 3-12. Youth Exposure to ETS in Cars in Past Week

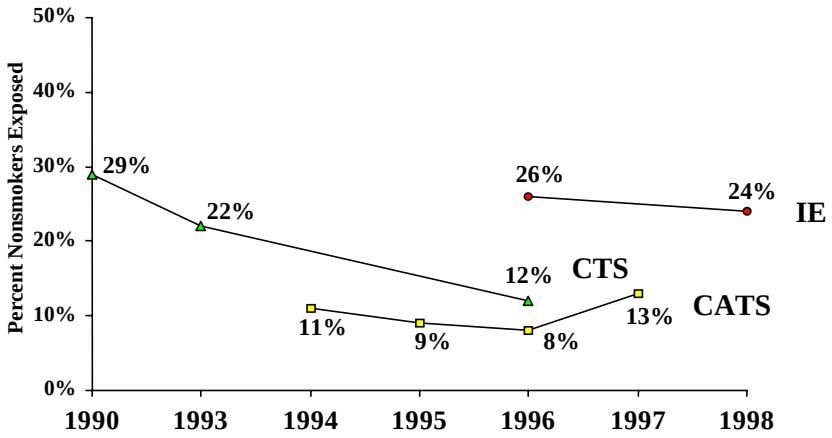


Source: School-based Youth Survey, 1998

Exposure to ETS at Work

Data from other California tobacco surveys have shown a large decline in the percent of nonsmoking workers who were exposed to secondhand smoke in their *work area*, from 29% in 1990 to 13% in 1997 (see Figure 3-13). The Independent Evaluation assessed exposure to secondhand smoke *anywhere* in the workplace. From 1996 to 1998, there was a nonsignificant decline in the percent of nonsmoking workers who had some exposure to smoke at work, from 26% to 24%. Smokers showed an even greater decrease, declining from 32% in 1996 to 26% in 1998.

Figure 3-13. Nonsmoking Workers Exposed to ETS at Work



Note: The CATS and CTS question asked about exposure to ETS in the work area, specifically, in the past two weeks; the IE question asked about number of days of exposure to ETS at work, generally, in the last seven days. Both questions were dichotomized into no exposure/some exposure. The analysis is based on workers who stated that their workplace had an official smoking policy. The discrepancies between the CATS and CTS data and the IE data are likely due to question wording differences (the CATS and CTS question is more restrictive).

IE = Independent Evaluation, CATS = California Adult Tobacco Survey, CTS = California Tobacco Survey

Sources: IE Adult Telephone Survey, 1996, 1998, California Adult Tobacco Survey, 1994-97, and California Tobacco Survey, 1990-96, as reported in *Tobacco Control in California, 1989-96*.

Some groups of nonsmokers are more likely to be exposed to ETS at work. Groups likely to be exposed on one or more days at work include:

- those 18-34 years old (vs. older adults).
- males (vs. females).
- those with less education (vs. those with more education).
- Hispanics and Asian/Pacific Islanders (vs. other ethnic groups).

Groups likely to be exposed five or more days per week include:

- Hispanics (vs. other ethnic groups).
- those with less education (vs. higher education).

These findings are consistent with other data examining who is at greatest risk (Pierce et al, 1998).

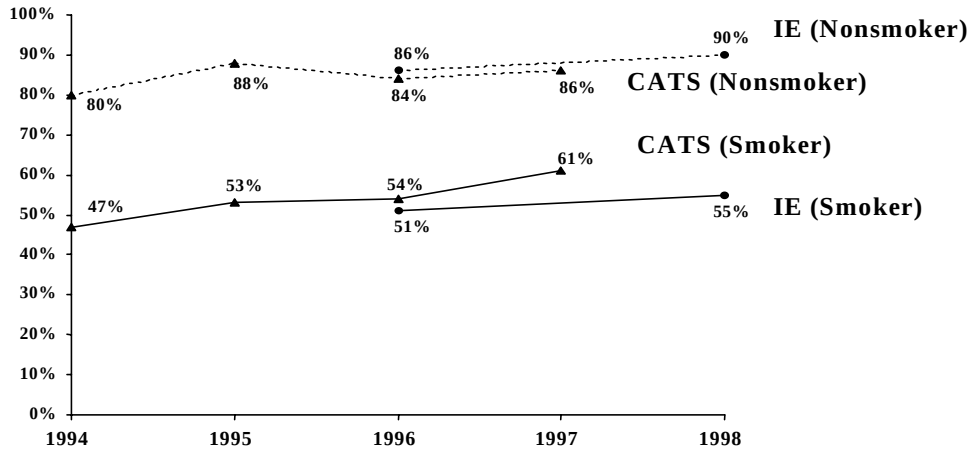
Voluntary Policies to Reduce ETS

Protecting Children from Exposure to ETS at Home

The major source of exposure to ETS among young children is from smoking by parents in the home (Brownson et al, 1997). Older children are also at risk since the home is the primary setting where nonsmokers who live with a smoker are exposed to ETS (Emmons et al, 1992). Reducing children's exposure to ETS at home is an important goal of the TCP.

The Independent Evaluation did not assess children's exposure to ETS at home directly, but data are available for parents reporting on whether they allow smoking in their home. **Among adults with children living at home, nonsmoking parents were nearly twice as likely to have a complete ban on smoking (90%) as smoking parents (55%) in 1998.** Although the amount of change from 1996 to 1998 was only marginally significant for nonsmokers ($p<.10$) and nonsignificant for smokers, the number of parents with children at home having complete bans on smoking has been rising since 1994 for both smokers and nonsmokers (see Figure 3-14). **However, a large proportion of Californian children with smoking parents still remain at risk for exposure to ETS in their own homes.**

Figure 3-14. Parents with Children Under 18 Years Having a Complete Ban on Smoking in Their Home



Source: IE Adult Telephone Survey, 1996 & 1998, California Adult Tobacco Survey, 1994-1997

Note: IE = Independent Evaluation, CATS = California Adult Tobacco Survey

Protecting Children from Exposure to ETS in Cars

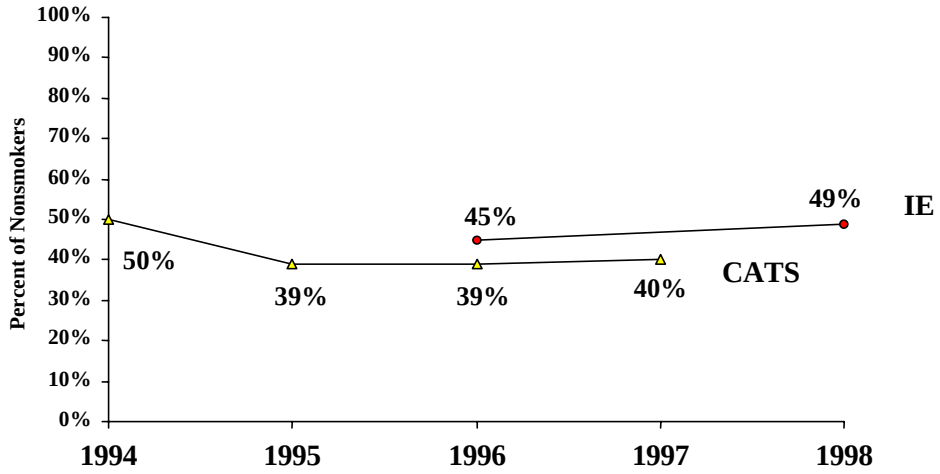
Over three-fourths of nonsmoking adults (76%) had a complete ban on smoking in their family car in 1998, which represented a nonsignificant decrease from 77% in 1996. The percent of *smokers* having a ban in their car remained low at 26%, suggesting that most nonsmoking family members and friends of smokers are at risk in a smoker's car. Between 1996 and 1998, there were no significant changes in the percent of nonsmoking adults (from 77% to 76%) and smoking adults (from 33% to 32%) with children who had bans on smoking in their family car.

Asking Someone Not to Smoke

The percentage of adults who had asked someone not to smoke around them in the last 12 months increased from 41% in 1996 to 43% in 1998 ($p<.10$).

- Among smokers, this behavior showed a nonsignificant increase between 1996 and 1998 (from 20% to 21%).
- Among nonsmokers, this behavior increased from 45% to 49% ($p<.10$) (see Figure 3-15). Data from the California Adult Tobacco Survey show that the percentage of nonsmokers asking someone not to smoke was relatively stable from 1994 to 1997.

Figure 3-15. Nonsmokers Asking Someone Not to Smoke

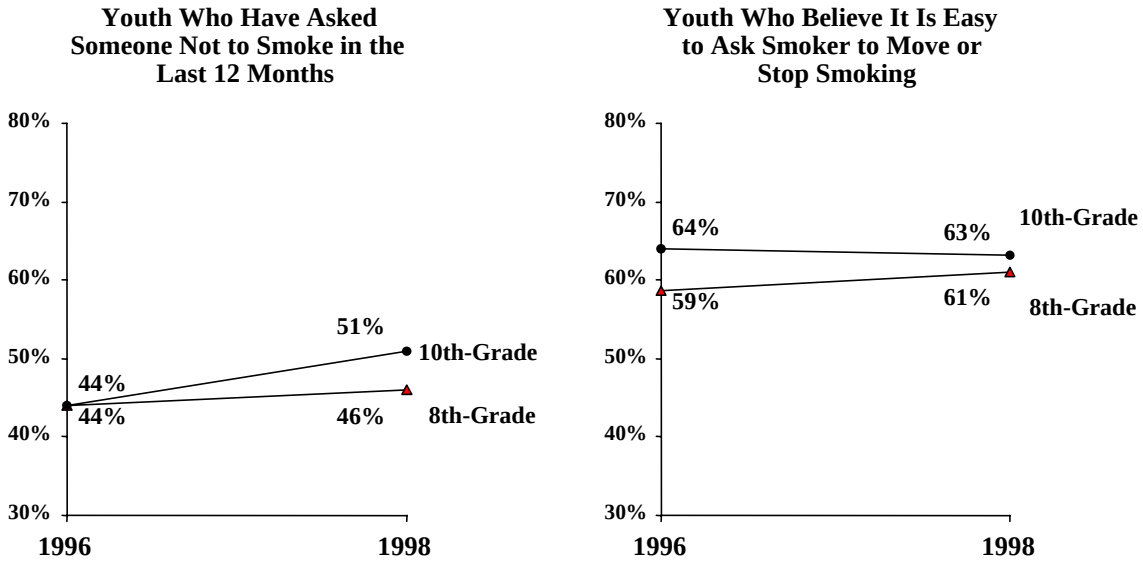


Note: IE = Independent Evaluation, CATS = California Adult Tobacco Survey

Sources: IE Adult Telephone Survey, 1996 and 1998, California Adult Tobacco Survey, 1994-1997.

The number of youth asking someone not to smoke in the past 12 months increased between 1996 and 1998 (from 44% to 46% for 8th-graders and from 44% to 51% for 10th-graders; p's<.10 and .01, respectively). There was no significant change in the number of youth who reported that it had become easier to ask someone smoking around them to stop or move to another area, (from 59% to 61% for 8th-graders and 64% to 63% for 10th-graders). (See Figure 3-16.) The percent of youth smokers reporting that people had asked them not to smoke did not change significantly between 1996 and 1998 for 8th-graders (from 27% to 26%) and remained at 30% for 10th-graders.

Figure 3-16



Source: School-based Youth Survey, 1996 and 1998

Attitudes and Opinions about ETS

Opinions About Smoking Restrictions in Bars[19]

The final provision of California's state law to protect the public from ETS in public settings – the requirement that bars be smoke free – was implemented in January 1998. The local community programs, as well as the statewide TCP media campaign, sought to educate the public and bar owners about the law as well as to create and publicize support for the law. **The majority of adults (77%) prefer bars to be smoke free, but there is still room to solidify public knowledge and support for the smoke-free bar law**.

- Six months after the smoke free bar law was in effect, over one-third of adults (36%) were unaware that smoking in California bars had been banned.
- 51% of bar patrons had seen smoking in a bar during the first six months of the smoke-free bar law.
- Overall, 35% of adults thought that the smoke-free bar law should be overturned; among nonsmokers it was 26% and among smokers it was 72%. Eighty percent of key opinion leaders believed that the smoke-free bar law should not be overturned.
- 60% of adults did not know why the smoke-free bar law was put into effect (to protect workers from ETS).
- 32% of nonsmokers thought is was acceptable for nonsmokers to be exposed to smoke in bars.

Public Acceptance of Smoking in Other Public and Private Settings[20]

In 1998, the Independent Evaluation asked respondents about the acceptability of smoking in various settings. Adults were asked whether they personally thought "it is okay for a person to smoke around nonsmokers" at bars and in five different settings not covered in current statewide clean air laws. There was remarkable uniformity between smokers and nonsmokers in the settings in which they believed smoking was acceptable or unacceptable, although overall, smokers thought smoking around nonsmokers was more acceptable than did nonsmokers (see Table 3-5). *The data suggest that efforts to prohibit smoking in hotel lobbies and bus shelters might be the next areas in which to extend the public's protection from ETS since they are exempt from AB 13.*

Table 3-5.
Percent of People Who Judged Smoking was Unacceptable in Different Settings, in Rank Order by Setting

Nonsmokers (n=6,528)		Smokers (n=1,563)	
96%	Nonsmoker's car/home	96%	Nonsmoker's car/home
84%	Hotel lobby	72%	Hotel lobby
74%	Bus shelter	53%	Bus shelter
68%	Bar	38%	Bar
55%	Outdoor café	37%	Smoker's car/home
51%	Smoker's car/home	31%	Outdoor café

Source: Adult Telephone Survey, 1998

Only about one-half of opinion leaders supported additional ETS restrictions in California. Opinion leaders thought that:

- Smoking in outdoor public areas should be restricted (54%).
- Bars should not be allowed to host special cigarette or cigar nights (50%).
- The government should not interfere with individuals' decisions about smoking (56%).[21]

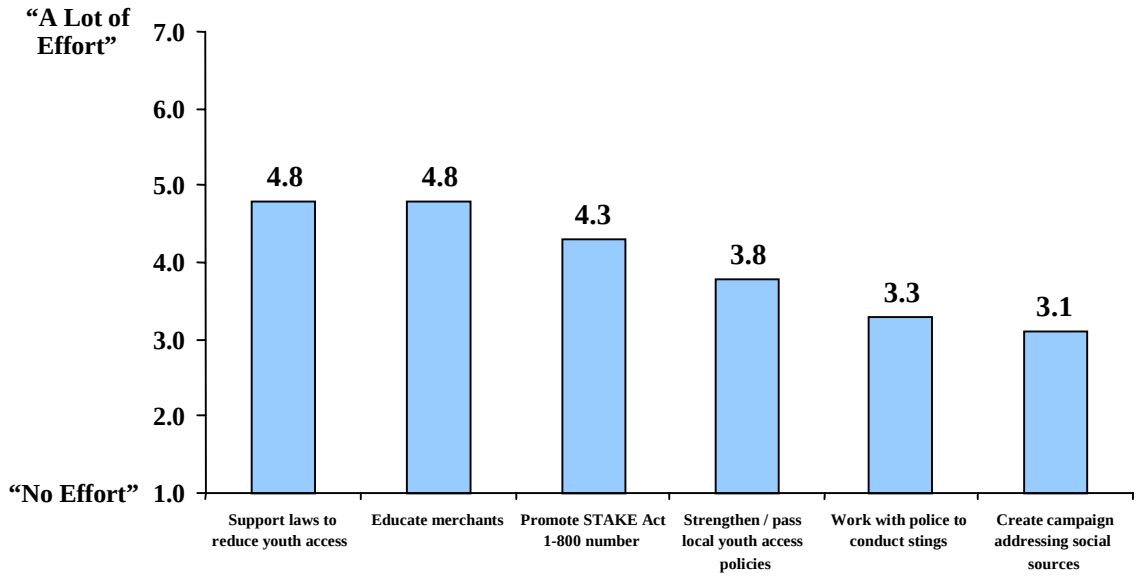
Reducing Youth Access To Tobacco Products

Program Efforts, Public Awareness, and Association with Change

Local Programs to Reduce Youth Access

Figure 3-17 shows the amount of effort TCP-funded agencies spent on activities to reduce youth access to tobacco products. The three youth access activities given the most attention were: generating support to enforce existing youth access laws, educating merchants about not selling tobacco to minors, and promoting the Stop Tobacco Access to Kids Enforcement Act (STAKE Act) toll-free number.[22] Each of these three activities focused on reducing retail sources of tobacco. Activities around policy and enforcement and the creation of campaigns to address social sources of tobacco were given the least attention.

Figure 3-17. Project Directors' Reported Efforts to Reduce Youth Access



Source: Project Director Survey, 1998

Public Awareness of Youth Access Programs[23]

Sixty percent of adults and 26% of 10th-grade youth reported being aware of sting operations to catch merchants selling to minors. Thirty-five percent of adults, 31% of 8th-graders, and 19% of 10th-graders reported being aware of social sources activities. [24]

In 1998, 39% of adults were aware of TCS-developed STAKE Act signs and ads to call 1-800-5-ASK-4-ID to report merchants selling cigarettes to youth. This was not significantly different from the rate in 1996, when 43% of adults reported being aware of TCS-developed STAKE Act signs and ads.

The Relationship Between TCP Efforts and Youth Access Outcomes

Measures of county level effort in 1998 to reduce youth access to tobacco were correlated with changes in outcomes from 1996 to 1998.[25] There were no significant associations observed between county effort and the percentage of 8th- and 10th-grade youth who:

- got their last cigarette from a retail source.
- were successful in purchasing cigarettes.
- thought cigarettes were easy to get.

Also, there was no association between county effort and the number of calls to the STAKE act number (1-800-Ask 4 ID).[26]

Policy Activity and Enforcement

Activities to strengthen youth access policies received a great deal of effort during the Independent Evaluation periods (see Table 3-6). **In 1997 and 1998 five cities within evaluation counties and two evaluation counties passed 13 new ordinance provisions related to restricting youth access to tobacco products that were stricter than statewide codes.** These ordinances included provisions that address: total bans on cigarette vending machines (3 cities), tobacco sampling (1 city), single cigarette sales (2 cities), and self-service displays for tobacco (4 cities, 1 county). San Mateo and Contra Costa were the first California counties to pass county-wide ordinances requiring retailer licensing of tobacco products.

Table 3-6. Number of Local Ordinance Activities to Restrict Youth Access to Tobacco in Evaluation Counties

	1995-1996		1997-1998	
	Initiated	Passed	Initiated	Passed
Youth Access Restrictions	19	12	20	13

In 1997-1998, restrictions were passed in El Cajon, Oceanside, San Diego, Pasadena, San Francisco, San Mateo County and Contra Costa County.

Source: American Nonsmokers' Rights Foundation; Project Director Surveys 1996, 1998.

City police departments and county sheriffs are responsible for the enforcement of policies to reduce youth access to tobacco. Table 3-7 displays the percentage of enforcement agencies within each of the evaluation strata that reported issuing warnings and citations to merchants and minors, and conducting 'sting' operations of merchants who sell tobacco. These percentages indicate that the majority of agencies are issuing warnings and citations to minors, and issuing warnings to merchants. However, agencies seem to be putting less effort toward issuing citations to merchants, and the majority of local enforcement agencies did not conduct compliance stings.

Table 3-7. Percent of Agencies Conducting Youth Access Enforcement Activities by Evaluation Strata

Type of County	Total No. of Enforcement Agencies[a]	Percent of Agencies Responding to Survey	Issued Warnings		Issued Citations		Conducted Stings
			Minors	Merchants	Minors	Merchants	
Media Markets	96	78%	90%	76%	96%	64%	39%
High-density	86	87%	84%	86%	82%	68%	42%
Medium-density	36	69%	83%	92%	84%	54%	17%
Low-density	8	88%	57%	57%	86%	27%	14%

[a] Represents the total number of police departments and sheriffs stations within a stratum.

Source: Youth Access Policy Enforcement Survey, 1998.

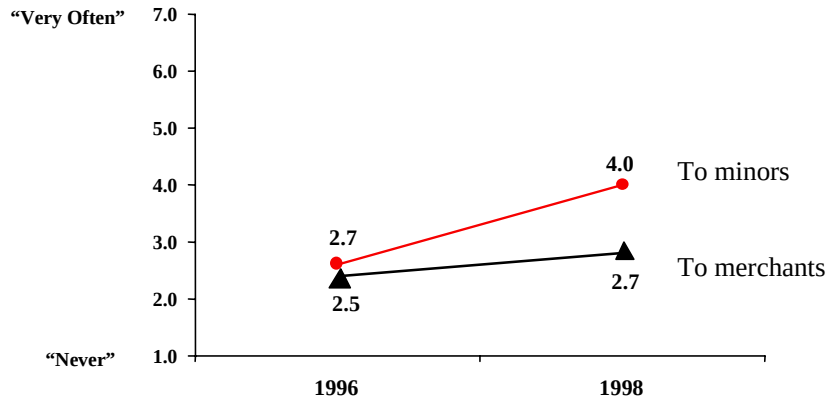
The overall percentage of agencies that conducted stings of merchants increased nonsignificantly from 35% in 1996 to 38% in 1998.[27] Enforcement agency officials were more likely to report that they conducted stings during the previous year if they[28]:

- Thought that it was a serious problem that kids can get tobacco products ($p<.01$).
- Perceived lower barriers to enforcement ($p<.01$).
- Reported higher collaboration with other individuals or groups to enforce policies to reduce youth access to tobacco ($p<.01$).

It is important to note that 2,000 - 4,000 compliance checks are also conducted annually by the federal Food and Drug Administration (FDA) in the state of California. The presence of the FDA stings may reduce the occurrence of stings conducted by local enforcement agencies. Research over the past decade shows that unannounced stings are the most effective activity to reduce the rate of illegal tobacco sales to minors (Altman, et al., 1989; Feighery et al., 1991; Jason, 1991).

Whether enforcement agencies had issued citations to merchants and to minors was compared from 1996 to 1998. The percentage of enforcement agencies reporting that they had issued at least one citation to merchants increased significantly from 51% to 66% ($p<.01$) and the percentage that had issued at least one citation to minors for possession of tobacco products increased even more dramatically from 60% to 88% ($p<.01$). However, when enforcement agencies were asked how often they issued citations to merchants and minors, only the frequency of issuing citations to minors increased ($p<.01$) (see Figure 3-18).[29]

Figure 3-18. Enforcement Trends: Issuing Citations to Minors or Merchants



Source: Enforcement Agency Survey, 1996 and 1998

There appears to be a trend developing among enforcement agencies to focus on youth possession of tobacco products. It is currently unknown whether this strategy, which is widely endorsed by the tobacco industry, is effective in reducing youth access or the rate of youth smoking because there are no controlled studies of the impact of enforcing youth possession provisions on reducing youth smoking.

From 1996 to 1998, the level of collaboration on youth access enforcement increased significantly from 82% to over 92% of enforcement agencies reporting collaborating with other organizations ($p<.01$).

To prevent stores from illegally selling tobacco to minors, most key opinion leaders supported:

- Enforcement efforts that focus on penalizing both youth and merchants (72%).
- Conducting police stings (86%).
- Requiring a license to sell tobacco (65%).[30]

Calling the STAKE Act Hotline

The STAKE Act mandated that the state create a toll-free number (1-800-5-ASK-4-ID) that residents call to report stores they believe are selling tobacco to minors. Stores reported to this hotline have an increased risk of being visited for a sting by the California Food and Drug Branch, the agency responsible for enforcing the STAKE Act. In addition to receiving calls about retail outlets, the number is also accepting calls for noncompliant billboards (e.g., ones that feature tobacco advertising near schools).

In 1997 and 1998 there were fewer STAKE Act activities conducted by community programs and much less attention paid to the STAKE Act hotline as part of the statewide media campaign. Out of nearly 40 general audience/youth audience ads run between January 1997 and June 1998, there were only four devoted to the STAKE Act. In addition, only 2% of the total media expenditures for general and youth audience campaigns during this time period was devoted to the STAKE Act hotline. Therefore, it is not surprising to see a corresponding drop in calls to the hotline during this time period. The average number of calls received monthly was 502 from January to June, 1996, but only 42 per month from January to June, 1998.

Youth Access to Tobacco Products

Youth Perceptions of How Easy it is to Obtain Tobacco Products

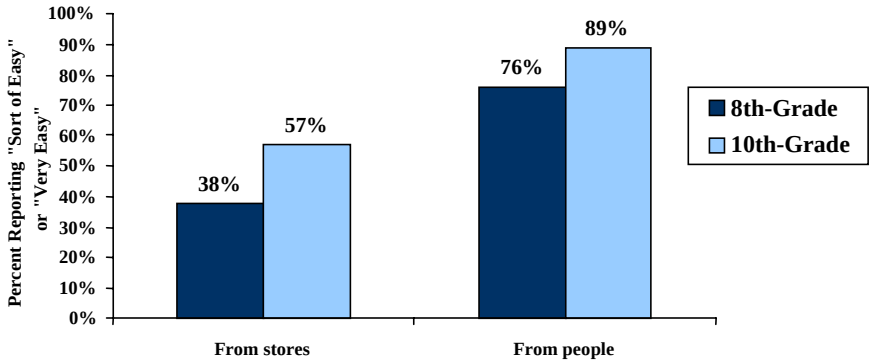
The rate of illegal sales to minors has decreased from 29% in 1996 to 13% in 1998, indicating that fewer retail outlets are selling to youth (Tobacco Control Section, 1998). Consequently, one would expect youth to report that it is harder for them to get access to cigarettes. However, **perceived difficulty in obtaining cigarettes remains virtually unchanged**. In 1996, 89% of 10th-graders said that it is "sort of easy" or "very easy" for them to obtain cigarettes, and in 1998 this number decreased nonsignificantly to 87%. The majority of 8th-graders also reported that it was easy to get cigarettes, and there were no changes between 1996 (67%) and 1998 (69%).

In 1998, the ease of obtaining tobacco was asked separately for retail and social sources.[31]

- For *retail* ease of access, 8th and 10th-graders were asked how easy it would be for them to "find a store in your community that will sell you cigarettes". Thirty-eight percent of 8th-graders and 57% of 10th-graders reported easy access (see Figure 3-19). There was no difference between smokers and nonsmokers in the perceived ease of obtaining cigarettes from retail sources for either 8th or 10th-graders.
- For *social* access, 8th and 10th-graders were asked how easy it would be for them to get cigarettes from "a friend, relative, or stranger". Seventy-six percent of 8th-graders and 89% of 10th-graders reported easy access. Smokers reported greater ease of obtaining cigarettes from social sources than nonsmokers ($p<.01$) for both 8th and 10th-graders.

California's efforts have reduced, but not eliminated youth access to tobacco at retail outlets. More youth report easy access from *social* sources than report easy access from *retail* sources, and the overwhelming majority of youth report that they have easy access to tobacco products from social sources.

Figure 3-19. Ease of Obtaining Tobacco: Retail versus Social Availability



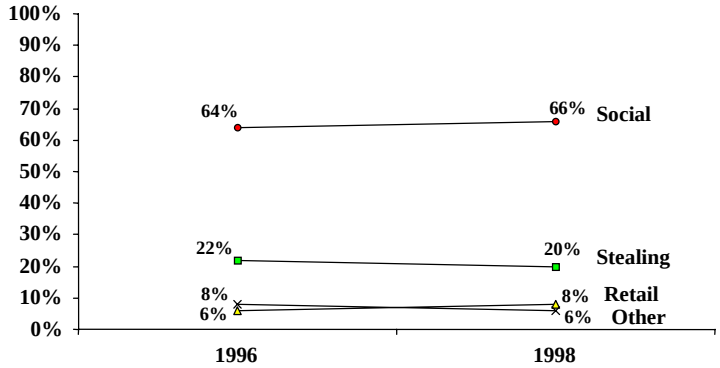
Source: School-based Youth Survey, 1998

Where Do Underage Youth in California Obtain Their Tobacco?

Eighth- and tenth-graders were asked if they had purchased cigarettes in the past 30 days. Of those who had attempted to purchase cigarettes, there was a decrease in the number of 8th-graders who were successful between 1996 (67%) and 1998 (60%) ($p<.10$), but no change in the number of 10th-graders who were successful (from 63% to 65%). **Even though fewer stores are selling to minors statewide, it appears that two-thirds of youth who smoke are well aware of which stores will sell to them.**

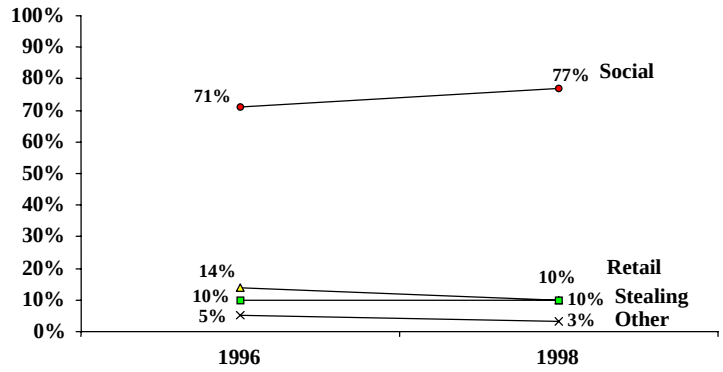
Youth are less likely to get their last cigarette from a retail source (<15%) than from a social source (>60%) (see Figures 3-20a and 3-20b). The percent of youth obtaining their last cigarette from a retail source did not change significantly between 1996 and 1998, nor did the percent of youth obtaining their last cigarette from a social source.

Figure 3-20a. Source of Last Cigarette for 8th-Grade Youth



Source: School-based Youth Survey, 1996 and 1998

Figure 3-20b. Source of Last Cigarette for 10th-Grade Youth



Source: School-based Youth Survey, 1996 and 1998

Table 3-8 displays where 8th- and 10th-grade youth report getting their last cigarette. **Most youth are obtaining their cigarettes from friends who *give* them the cigarettes.**

- Of the three primary methods of obtaining tobacco (buying, stealing, or being given cigarettes), more youth report being given their last cigarette than buying or stealing it.
- In 1998, 42% of 8th-graders obtained their last cigarette from a friend who gave it to them, the same percent that was reported in 1996.
- In 1998, 54% of 10th-graders obtained their last cigarette from a friend who gave it to them, a significant increase from the 44% who reported this in 1996 ($p<.01$).

Additional analyses indicated that 47% of 10th-graders reported that they were offered a cigarette in the past 30 days, and in 68% of these cases it was a friend who offered the cigarette. These numbers are virtually identical to what was seen in 1996.

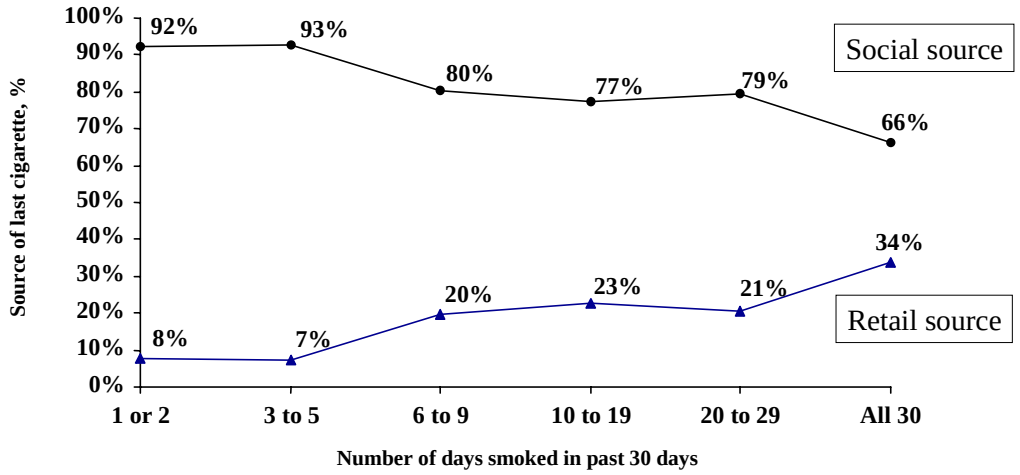
Table 3-8.
Sources of Last Cigarette for 8th and 10th-Grade Youth[32]

8th	10th	
(84%)	***(86%)***	***Social***
42%	54%	A friend gave them to me
10%	7%	A family member gave them to me
3%	4%	Other people (besides my family or friends) gave them to me
7%	9%	A friend bought them for me
1%	2%	A family member bought them
3%	2%	Other people bought them for me
18%	9%	I took them from a person without permission
(10%)	***(11%)***	***Retail***
8%	10%	I bought them myself
2%	1%	I took them from a store without permission
(6%)	***(2%)***	***Other***

Source: School-based Youth Survey, 1998

In 1998, the majority of 10th-grade youth reported that the source of their last cigarette was a social source rather than a retail source, regardless of the number of days they smoked in the past month (see Figure 3-21). This was the case even among youth who smoke heavily (smoking on 20 or more days in the past month). This represented a nonsignificant increase over the percent observed in 1996. Studies conducted outside of California have shown that youth who are heavy smokers are far more likely to purchase their own cigarettes than obtain them from social sources (Centers for Disease Control and Prevention, 1996; Forster et al., 1997).

Figure 3-21. Source of Last Cigarette as a Function of Number of Days Smoked (10th-Grade "Ever Smokers")



Source: School-based Youth Survey, 1998

It appears that agencies charged with enforcing youth access laws have shifted their thinking over time on where youth get cigarettes. In 1998, 48% of enforcement agencies thought that youth obtained most of their cigarettes from retail outlets, significantly fewer than the 59% who thought this in 1996 ($p<.10$). Parallel to this finding, 52% of enforcement agencies thought that youth obtained most of their cigarettes from social sources, a significant increase from the 41% who thought this in 1996 ($p<.10$).

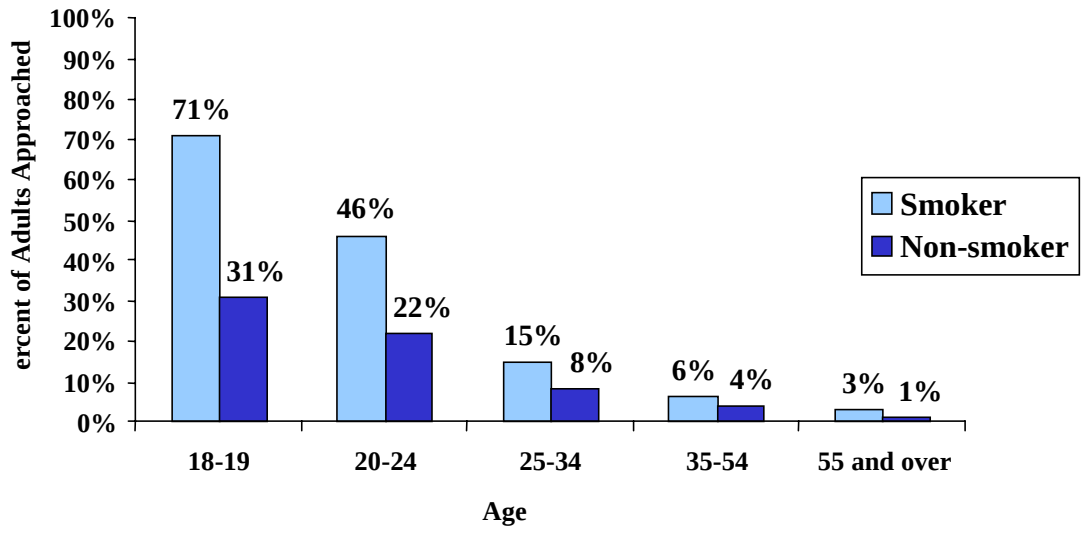
This shift in thinking is consistent with a recent study by Rigotti, et al (1997) that showed that reduced youth access at retail outlets was associated with an increase in youth obtaining tobacco from *social sources*, but it did not reduce the prevalence of teen smoking. These findings suggest that youth access should be addressed comprehensively so that both retail and social availability are reduced.

Adult's Role in Providing Tobacco to Youth

Adults were asked if underage youth had approached them and asked them to buy cigarettes. Although the survey did not contain questions about whether the adult actually bought the tobacco, the results are still valuable to guide intervention efforts. Overall, 9% of adults had been asked in the past year to buy cigarettes for a minor.[33]

- Among these adults, 70% had been asked by a stranger, 33% by a friend, and 18% by a relative.[34]
- **Youth appear to be very selective in who they approach to buy cigarettes for them.** As shown in Figure 3-22, they seem to be targeting young adults, primarily smokers. Even though only 9% of adults overall were asked to buy, among 18-19 year olds, the rate of being asked to buy was 71% for smokers and 31% for nonsmokers. Among 20-24 year old smokers, the rate was 46%. For all age groups, smokers were more likely to be asked to buy cigarettes for minors than nonsmokers.

Figure 3-22. Adults Approached by Youth to Buy Cigarettes



Source: Adult Telephone Survey, 1998

Summary

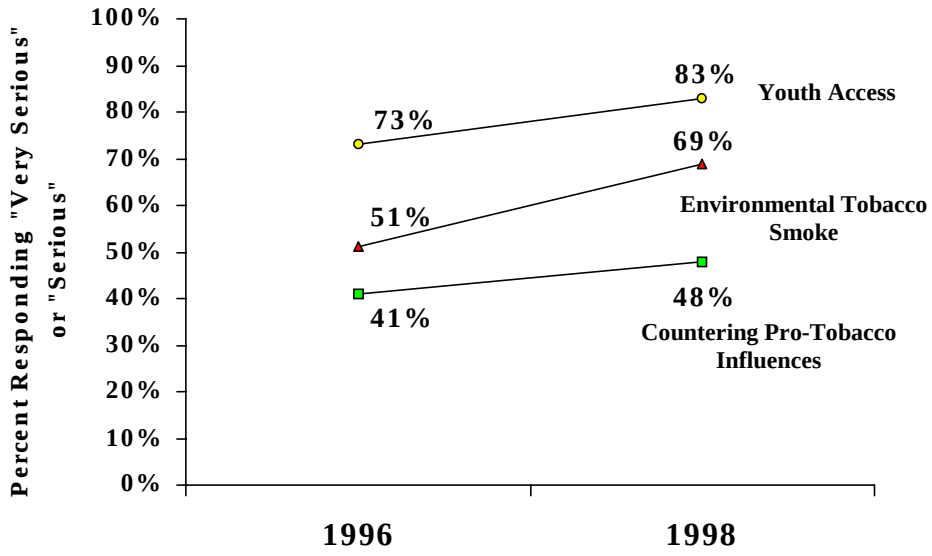
The data presented in this chapter indicate that California is making progress toward its goal of changing the public norms about the acceptability of smoking. Significant associations were found between the TCP local program efforts and changes in important tobacco control outcomes for adults between 1996 and 1998 in the areas of CPTI and ETS. The analyses showed fewer and smaller relationships between program inputs and youth outcomes.

Higher levels of local tobacco control program activity in the CPTI area were associated with increased concern about the problem of pro-tobacco advertising, more negative views of the tobacco industry, more support for restrictions on tobacco advertising and promotion, and more discussion with others about the problem of tobacco advertising and marketing.

Higher levels of local tobacco control program activity in the ETS area were associated with less exposure to ETS at work and home, more personal bans on smoking in cars, and a higher frequency of people asking others not to smoke around them. These results are encouraging for adults. Both adult and youths' attitudes about tobacco industry marketing and acceptance of ETS either remained negative or became more strongly opposed to the presence of tobacco in their communities. These social norm changes are a positive sign that may be associated with long-term changes in smoking prevalence and cigarette consumption in California's future.

An important constituency of the TCP is opinion leaders. One sign that the TCP is achieving its social norm change goals is the changes in opinions of community leaders. Between 1996 and 1998, community opinion leaders from government, business, media, law enforcement, and education reported increased concern about the tobacco-related problems associated with youth access to tobacco, ETS, and pro-tobacco influences (p's<.01) (see Figure 3-23).

Figure 3-23. Opinion Leaders' Perceived Seriousness of Tobacco Problems

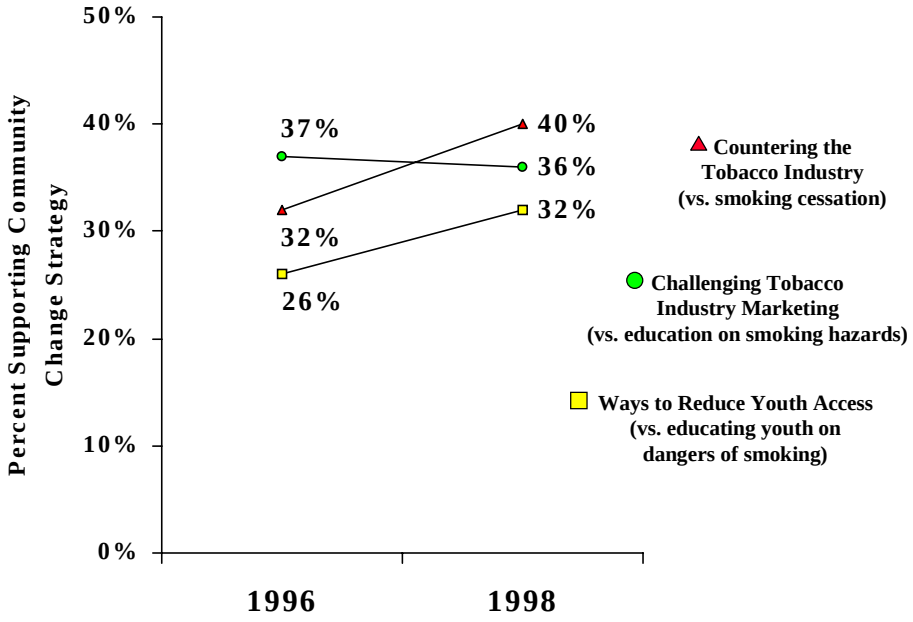


Source: Opinion Leader Survey, 1996 and 1998.

In addition, opinion leaders were asked which of two strategies they favored for tobacco control in the future. One strategy focused on changes in individuals' behaviors (e.g., smoking cessation) and one focused on changes effected at the community level (e.g., countering the tobacco industry). In general, the focus on the TCP efforts has been on community level change strategies.

In 1998, the majority of opinion leaders favored individual change strategies (smoking cessation, education on the personal hazards of second-hand smoke, educating youth about the dangers of tobacco use) over community change strategies (countering the tobacco industry, challenging tobacco industry marketing strategies, ways to reduce youth access to tobacco products). However, for two of the three questions asked, the percentage of opinion leaders choosing community level strategies significantly increased from 1996 to 1998 ($p<.05$) (see Figure 3-24). Whatever the future direction of the TCP, most opinion leaders (87%) thought it was important "that the government spends money on efforts to reduce tobacco use."

Figure 3-24. Opinion Leaders' Choice for the Focus of Future TCP Efforts



Source: Opinion Leader survey, 1996 and 1998.

This chapter documented that local governments are active in passing ordinances to counter pro-tobacco advertising, further restrict the public's exposure to ETS, and make it harder for youth to obtain tobacco. Enforcement agencies are actively enforcing the provisions of the statewide ETS laws and youth access laws prohibiting illegal tobacco sales and possession of tobacco by minors. Continued activity in policy and enforcement are important indicators that communities are working towards, and achieving, social norm change. The Independent Evaluation will continue to monitor policy and enforcement activity and weigh this information in the overall evaluation of the success and impact of the California TCP.

CHAPTER 4

THE STATEWIDE MEDIA CAMPAIGN

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The Statewide Media Campaign

Introduction

The statewide media program has two major components. The most visible part is the media campaign, which delivers paid advertisements through outdoor advertising, television, radio, and print. Most ads are aimed at a general audience, and a smaller but substantial proportion are developed specifically for ethnic populations and youth.

There is also a public relations (PR) component that is less visible to the public. It provides training workshops and technical assistance for local community media efforts, support of statewide tobacco control initiatives, a newsletter, outreach to high school newspapers, and a traveling "Team O2" van that conducts anti-tobacco education.

Program Effort

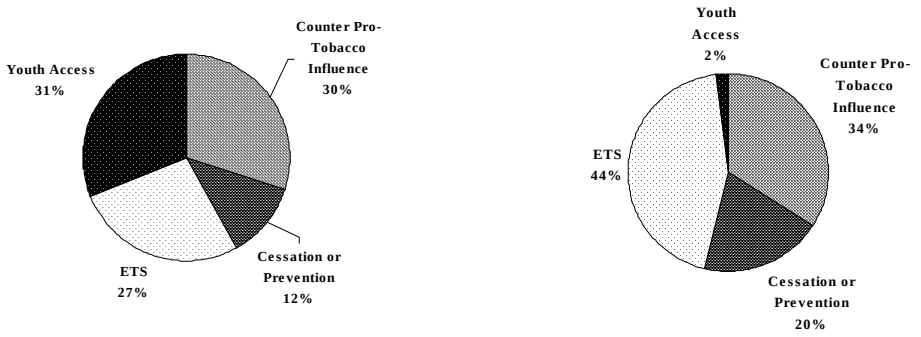
Characteristics of the 1997-1998 Statewide Media Campaign

From January 1997 through June 1998, the statewide campaign circulated ads that supported four TCS priority areas:

- Raising individuals' awareness of environmental tobacco smoke (ETS), with ads that portrayed the risks of breathing someone else's smoke
- Countering pro-tobacco influence (CPTI), with ads that criticized the tobacco industry's tactics
- Cessation or prevention messages that discouraged individual tobacco use by emphasizing the risks of smoking, the advantages of not smoking, or a 1-800 number to call for support in quitting
- Discouraging youth access and sales to minors (YA) with ads that gave a 1-800 number to report tobacco sales to youth

In 1997–1998, the general audience campaign's main focus was on ETS (44% of expenditures), followed by countering pro-tobacco influence (34%), and cessation/prevention messages (20%). Only a small proportion of the statewide media expenditures were focused on youth access (2%).[1] In contrast, in 1995–1996, funds were more evenly split between ETS, CPTI and YA (IE, 1998) (see Figure 4-1).

Figure 4-1. Percent of Total Dollars Spent on General Audience Advertisements by Priority Area



Source: TCS Media Plans for 1997-1998; Final Report for Wave 1

Funding for the distribution of general audience ads was substantially higher in the January 1997 through June 1998 period ($24.9 million), compared to the previous 18 month period of July 1995 through December 1996 ($10.2 million).

From January, 1997 through June, 1988, a total of 40 general audience ads were run by TCS, including:

- 20 television ads
- 12 radio ads
- 8 outdoor ads (billboards, bus-sides, and posters)

This compares with 19 general audience ads run from July 1995 through December 1996, including 11 television, 4 radio, and 4 outdoor ads (IE, 1998).

In summary, the 1997–1998 statewide media campaign was much more highly funded, with a much larger selection of ads compared to the 1995-1996 media campaign.

Youth, Adult and Opinion Leader Exposure to the 1997-1998 Statewide Media Campaign

Almost all youth and adults were exposed to the media campaign in 1998. More than nine out of ten 8th-graders (93%), 10th-graders (95%), adults (91%) and opinion leaders (95%) saw one or more of the TCP media campaign advertisements on television, radio, or billboards.[2]

The 8th- and 10th-grade school-based youth surveys assessed exposure to seven of the most widely circulated ads, while the adult and opinion leader surveys assessed exposure to six of the most widely circulated ads (see Table 4-1). The 10th-grade and adult surveys also assessed recall of ads run several years earlier, to determine what proportion of respondents had long-term exposure to the campaign.

Table 4-1.
Statewide Media Ads Assessed in the 1998 Surveys

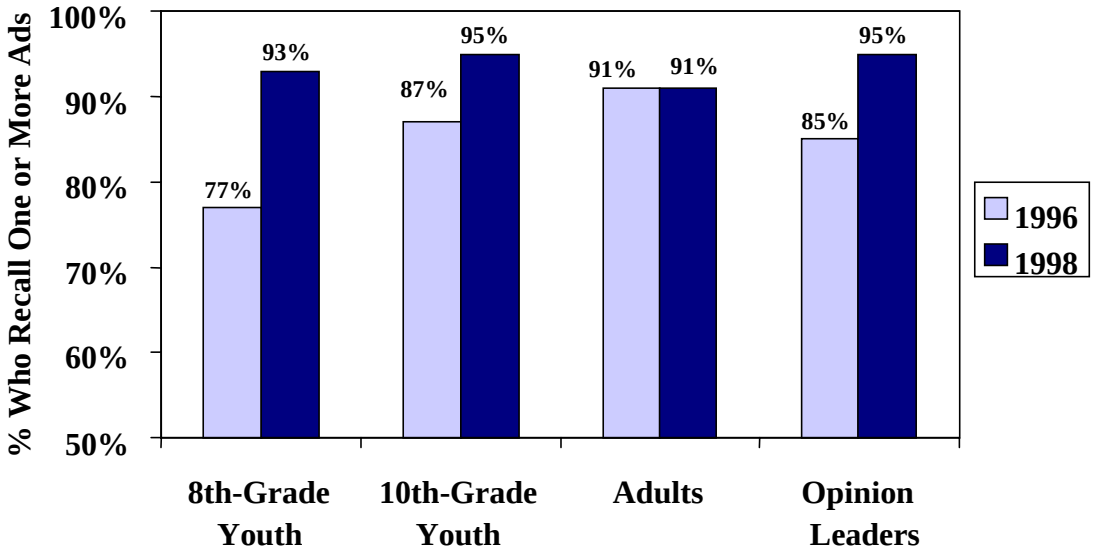
8th-Grade	10th-Grade	Adult	Opinion Leader
Voicebox (TV)	Voicebox	Voicebox	Voicebox
Cattle (TV)	Cattle	Rain	Rain
Rain (TV)	Rain	Baby Blocks	Baby Blocks
Baby Blocks (TV)	Baby Blocks	Waitress (TV, Radio)	Waitress
Toilets (TV)	Toilets	Chad (TV)	Chad
Bob (Billboard)	Bob	Bob	Bob
Thank You (Radio)	Thank You	Boardroom (TV)**	
	Hooked (TV)*		

* Last aired in December, 1996
** Last aired in May, 1995.

Exposure to the general audience media campaign was significantly greater in 1998 than in 1996 for 8th-grade and 10th-grade youth and opinion leaders (p's<.01), while there was no difference in exposure for adults (see Figure 4-2).[3]

Among key opinion leaders, the level of exposure to the 1998 campaign did not differ significantly by organizational affiliation, gender, ethnicity, smoking status, or political conservatism.

Figure 4-2. Youth, Adult, and Opinion Leader Exposure to the Statewide Media Campaign in 1996 and 1998



Source: Adult Telephone, School-based Youth and Opinion Leader Surveys, 1998

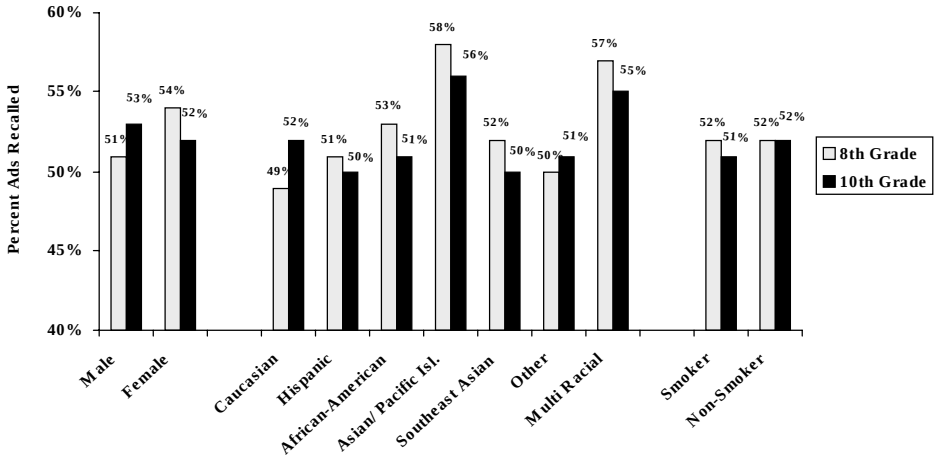
1997-1998 Campaign Exposure Among Population Subgroups

Overall, campaign exposure was very high; however, certain population groups had slightly lower exposure than others. This is worth noting if higher exposure is desired among certain groups. The following statements are based on the percent of campaign ads recalled by youth and adults.

<u>Youth Exposure</u>. For English-speaking 8th-grade youth, the general audience media campaign had its lowest reach among males, Caucasians, and youth who identified their race/ethnicity as "Other." For 10th-grade youth, the lowest reach was among Southeast Asian Americans (see Figure 4-3).[4] Within these groups:

- Eighth-grade males had lower exposure than females ($p<.05$; non-significant for 10th-graders).
- Eighth-grade Caucasians and Other ethnic/racial groups had lower exposure than Asian/Pacific Islander Americans ($p<.05$); 10th-grade Southeast Asian Americans had lower exposure than Asian/Pacific Islander Americans ($p<.05$). Differences between all other racial/ethnic groups were not significant.
- There were no significant differences in media exposure between youth smokers and non-smokers.

Figure 4-3. Media Campaign Exposure Among 8th- and 10th-Grade Youth, by Subgroups

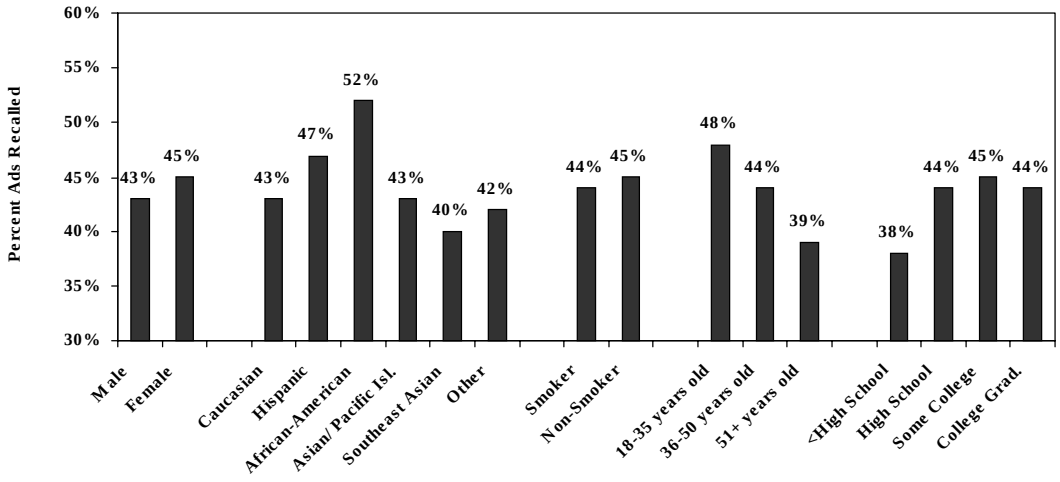


Source: School-based Youth Survey, 1998

<u>Adult Exposure</u>. For English-speaking adults, the general audience media campaign had its lowest reach among older adults, those with less than a high school education, and Southeast Asian Americans (see Figure 4-4).[4] Within these adult groups:

- Men had lower exposure than women ($p<.05$).
- Those who had not completed high school had lower exposure than those with more education ($p<.05$).
- Adults over age 50 had less exposure than those under 50 ($p<.05$); those age 36 to 50 had less exposure than those under age 36 ($p<.05$).
- Southeast Asian Americans had less exposure than African Americans and Hispanics ($p<.05$). Differences between all other ethnic/racial groups were not significant.

Figure 4-4. Media Campaign Exposure Among Adults, by Subgroups



Source: Adult Telephone Survey, 1998

Among Southeast Asian 10th-graders and adults who speak English at home at least half of the time, there was relatively low exposure to the general audience campaign, compared to other groups. However, the TCP has implemented an ethnic media campaign delivered in Vietnamese through Vietnamese language channels, to improve the reach of culturally relevant anti-tobacco messages to this population sub-group. Similar campaigns exist for Chinese, Korean, and Spanish language channels. Exposure to these campaigns is not evaluated here.

Program Outcomes

Recall of Individual Ads

Several types of reactions to the individual ads were measured to determine which ones generated stronger recall, whether their correct meaning could be identified after exposure, and whether they elicited emotional reactions, prompted thoughts about quitting or asking others not to smoke, or generated interpersonal discussions.

Among adults and opinion leaders, recall was highest for Voicebox and Waitress. Among youth, recall was highest for Voicebox, Rain, Cattle, and Toilets. All of these ads ran on television (see Table 4-2.) Television ads generated better exposure than radio and billboard ads, especially among youth. Recall was relatively high for Boardroom, which had been off the air since 1995, and for Hooked, which last aired in 1996.

Table 4-2.
Percent of Youth and Adults
Who Recall Individual TCS Media Ads

TCS Ad	Medium	8th-Graders %	10th-Graders %	Adults %	Opinion Leaders %
Voicebox	TV	88	91	75	74
Cattle	TV	62	61	N/A	N/A
Rain	TV	68	64	42	40
Toilets	TV	64	60	N/A	N/A
Waitress	TV	N/A	N/A	64	68
Baby Blocks	TV	44	43	29	27
Chad	TV	N/A	N/A	30	40
Thank You	Radio	29	31	N/A	N/A
Bob	Billboard	26	29	34	54
Board Room	TV	N/A	N/A	38	N/A
Hooked	TV	N/A	51	N/A	N/A

Note: "N/A" means ad recall question not asked of the respondent type

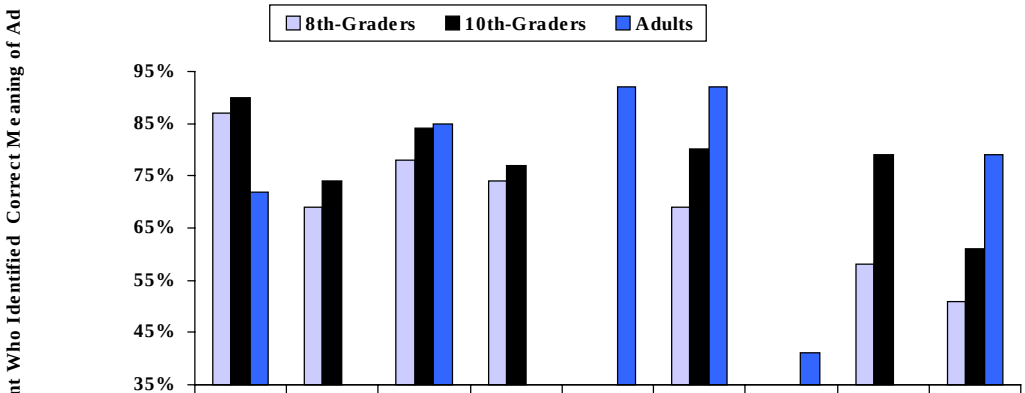
Correct Understanding of Individual Ads

Adults and youth who said they recalled an ad were asked to identify the correct meaning of the ads they recalled. Figure 4-5 provides the percentage of respondents who identified the correct meaning (i.e., validated the recall) of ads they had seen or heard.

- Among 8th- and 10th-graders, Voicebox and Rain were most likely, and Bob was least likely, to have the correct meaning identified. There may have been slight confusion about the meaning of the Bob ad, because a new version of Bob, with a slightly different meaning, was launched at the same time as the IE surveys.
- Among adults, Waitress and Baby Blocks had the highest validated recall and Chad had the lowest. However, Chad had only aired for a month or two prior to the survey so respondents may not have had as many opportunities to see and understand this ad as they did with other campaign spots.

Voicebox, Rain, Waitress and Baby Blocks provided relatively clear and easily understood messages. Television appears to be a better medium for conveying difficult ideas, while billboards and radio may not lend themselves as well to complex messages.

Figure 4-5. Percent of Adults and Youth Who Identified the Correct Meaning of Ads



	Voicebox	Cattle	Rain	Toilets	Waitress	Baby Blocks	Chad	Thank You	Bob
8th-Graders	87%	69%	78%	74%	n/a	69%	n/a	58%	51%
10th-Graders	90%	74%	84%	77%	n/a	80%	n/a	79%	61%
Adults	72%	n/a	85%	n/a	92%	92%	41%	n/a	79%

Note: n/a means the question was not asked of the respondent type

Source: Adult Telephone Survey and School-based Youth Survey, 1998

Emotional Response to Individual Ads

Tenth-grade youth were asked to check which emotional reactions they had, from a list of five possible reactions, to five of the media campaign ads.[5] The most common emotional reactions were as follows:

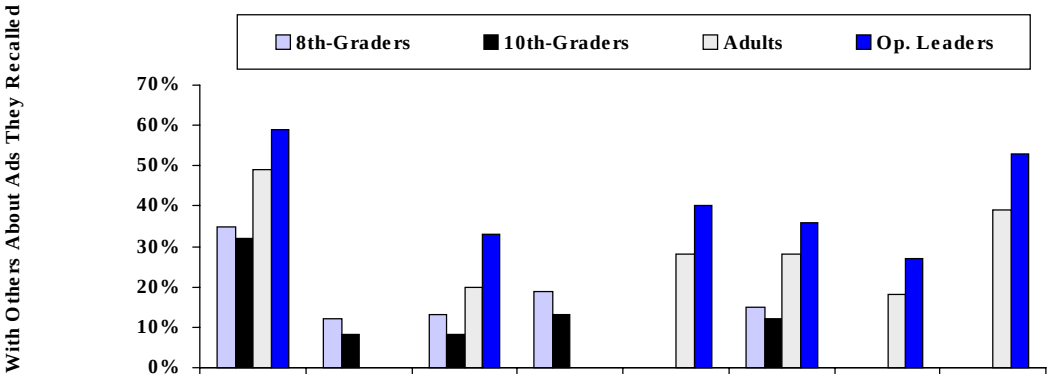
- Voicebox - disgusted (64%), sad (31%), scared (31%)
- Baby Blocks - sad (52%)
- Toilets - laugh (67%)
- Cattle - angry (33%)
- Rain - angry (38%)

Voicebox, Baby Blocks and Toilets were most likely to evoke emotional responses in 10th-graders. Of these, Voicebox evoked the greatest variety of emotions.

Behavioral Response to Individual Ads

Several of the media ads were provocative. They generated discussion among friends, family members and acquaintances. **Voicebox and Bob generated more discussion among adults and key opinion leaders than the other media ads. Among youth, Voicebox was discussed more frequently than the other ads** (see Figure 4-6). This behavioral step can help respondents replay or elaborate upon the ideas in the ad, and spread the message to others in their network. This is especially important among key opinion leaders, who may serve to increase the credibility and salience of anti-tobacco messages they discuss with others.

Figure 4-6. Percent of Adults and Youth Who Talked With Others About the Ads they Recalled



	Voicebox	Cattle	Rain	Toilets	Waitress	Baby Blocks	Chad	Bob
8th-Graders	35%	12%	13%	19%	n/a	15%	n/a	n/a
10th-Graders	32%	8%	8%	13%	n/a	12%	n/a	n/a
Adults	49%	n/a	20%	n/a	28%	28%	18%	39%
Op. Leaders	59%	n/a	33%	n/a	40%	36%	27%	53%

Note: n/a means the question was not asked of the respondent type

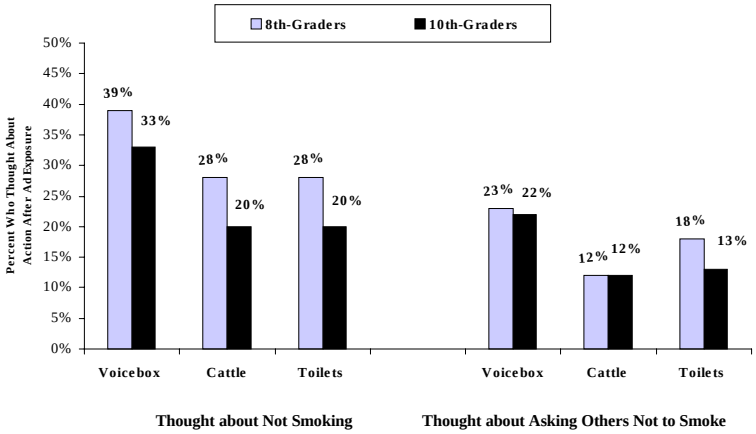
Source: Adult Telephone, School-based Youth and Opinion Leader Surveys, 1998

Cognitive Response to Individual Ads

Three ads in the youth surveys were followed by questions about whether the ads prompted thoughts about not smoking or about asking others not to smoke (see Figure 4-7):

- After viewing Voicebox, Cattle, and Toilets, youth were more likely to think about not smoking than to ask others not to smoke.
- One-third of youth (39% of 8th-graders, 33% of 10th-graders) considered not smoking after viewing Voicebox.

Figure 4-7. Percent of Youth Who Thought about Not Smoking or Thought About Asking Others Not to Smoke, After Exposure to an Ad



Source: School-based Youth Survey, 1998

In sum, Voicebox was a particularly successful ad in this campaign. It was widely seen, and it evoked emotional reactions, interpersonal discussion, and thought processing about not smoking or asking others not to smoke.

Relationships Between Youth and Adult Exposure to the 1997–1998 Statewide Media Campaign and Tobacco-Related Outcomes

The statewide media campaign was related to important intermediate and ultimate outcomes in the focal areas of countering pro-tobacco influence, reducing youth access, and tobacco use prevention and cessation. These relationships are presented below.[6]

Reducing ETS

The media campaign was associated with personal actions and beliefs that could lead to reductions in ETS risk. However, it was not associated directly with lower ETS exposure. Among those with higher validated recall of the media campaign:

- Youth and adults were more likely to believe that ETS causes cancer (correlation = .21 for 8th-graders and 10th-graders, p's<.01; correlation = .18 for adults, p<.01).
- Adults were more likely to ask others not to smoke (correlation = .10, p<.01).

One of the aims of the media campaign has been to build support for clean indoor air, using ads such as Waitress. **The media campaign had positive outcomes related to adults' attitudes and beliefs about smoking in bars.** Adults who had more exposure to the media campaign were more likely to:

- Prefer smoke free bars (correlation = .08, p<.01)
- Understand the reason for the restrictions on smoking in bars (correlation = .18, p<.01)
- Not believe the law on smoking in bars should be overturned (correlation = -.11, p<.01)

Respondents who had discussion about the ads they saw or heard were more likely to believe that ETS causes cancer than those who did not discuss the ads (correlation = .09 for 8th -graders, .07 for 10th-graders, p's<.01; not assessed in adults).[7] There was no association between discussing the ads and lower ETS exposure.

Countering Pro-Tobacco Influence

One of the enduring characteristics of the California media campaign has been its focus on ads that challenge the credibility of the tobacco industry. **During 1998, exposure to the campaign was associated with more negative attitudes toward the tobacco industry, and, among youth, greater support for policies that would restrict tobacco marketing.** Among those with higher exposure to the media campaign:

- Youth and adults were more likely to have negative attitudes toward the tobacco industry (correlation = .33 for 8th-graders, .18 for 10th-graders, .25 for adults; p's<.01).
- Youth were more likely to support policies restricting tobacco marketing (correlation = .08 for 8th-graders, .07 for 10th-graders; p's <.01).

Youth who talked about the ads they saw were more likely than those who did not talk about the ads to have negative attitudes about the industry (correlation = .10 in 8th-graders, .07 in 10th-graders, p's<.01).

Reducing Youth Access to Tobacco

During 1997 and 1998, there were few ads that focused on reducing youth access to tobacco. The association between media campaign exposure and youths' perceived access to tobacco was very low (correlation < .05, p<.05).

Tobacco Use, Prevention and Cessation

Several media campaign ads, such as Voicebox, and Bob, had messages that promoted tobacco use prevention or cessation, while also challenging the tobacco industry. The media campaign was associated, in the desired directions, with beliefs about tobacco use and susceptibility to tobacco use:

Among youth (not asked of adults), more media exposure was associated with:

- **More beliefs about the negative consequences of smoking** (correlation = .17 for 8th-graders, .18 for 10th-graders; p's<.01)
- **Fewer beliefs about the positive consequences of smoking (**correlation = -.21 for 8th-graders, -.16 for 10th-graders; p's <.01)
- **Less susceptibility to smoking**[8] (correlation = -.07 for 8th-graders, -.05 for 10th-graders; p's<.01)
- **Among 8th-graders, a stronger belief that they could refuse tobacco offers from friends** (correlation = .18, p<.01)
- **Among 10th-graders, a lower perceived prevalence of peer smoking** (correlation = -.11, p<.05).

Among 10th-graders who saw and talked about the media ads, beliefs about the negative consequences of smoking were greater than among those who did not talk about them (correlation = .08, p<.01; non-significant for 8th-graders). Refusal self-efficacy was not as strong among 8th-graders who talked about the ads they saw, compared to those who did not talk about them (correlation = -07, p<.01; non-significant for 10th-graders).

The media campaign was associated with a lower smoking prevalence and more calls to the helpline among youth, and more quit attempts among youth and adults. Specifically, more media exposure was associated with:

- Lower 30-day smoking among youth (correlation = -.06 for 8th-graders, -.10 for 10th-graders, p's<.01; non-significant for adults)
- More calls to the quit-smoking helpline among 8th-graders (correlation = .13, p<.01; non-significant for 10th-graders and adults)
- More quit attempts in the past six months among 8th-graders and adults (correlation = .13 for 8th-graders, .07 for adults; p's<.01; non-significant for 10th-graders)

Relationships Between Opinion Leader Exposure to the 1997–1998 Statewide Media Campaign and Tobacco-Related Outcomes

Opinion leaders who saw or heard more of the statewide media campaign were more likely to believe tobacco is a problem, believe that tobacco ads influence youth, support tobacco regulations, and participate in local tobacco control activities (p's<.01). Relationships to intermediate outcomes were stronger when opinion leaders talked about the ads to which they were exposed.

Opinion leaders who talked with others about the ads were more likely than those who did not talk about the ads to:

- Believe that tobacco use is a problem (correlation = .24, p<.01)
- Believe that tobacco ads influence youth to smoke (correlation = .22, p<.01)
- Support policies countering the tobacco industry (correlation = .18, p<.01)
- Participate in community tobacco control activities (correlation = .33, p<.01)
- Believe that the TCP should focus more on countering the tobacco industry than on smoking cessation (correlation = .14, p<.01)
- Support stricter tobacco control policies (correlation = .22, p<.01)

Support of Local Program Efforts by Statewide Media

The statewide media program (public relations and the media campaign) works in conjunction with local tobacco program efforts, by providing technical assistance, broadcasting compatible messages, and helping to raise community awareness about issues that the local programs are actively addressing.

In 1998, Project Directors from Tobacco Control Section (TCS)-funded tobacco control projects found the statewide media program to be a useful resource in furthering their local work. When asked to rate their agreement with statements about specific statewide public relations and media efforts, on seven-point scales (1=strongly disagree; 7=strongly agree), Project Directors reported:

- The media newsletter is informative and useful (4.9 mean score).
- The press kits are useful, timely, and well written (4.9).
- The PR trainings and presentations are informative and useful (5.1).
- TCS materials on Smoke Free Bars and Restaurants are useful (5.5).
- Team O2 van project is a useful resource (4.5).
- TCS PR efforts provided useful tools to help get local work done (4.9).
- Statewide media helped us further our local policy (5.2), program (5.3) and media (5.0) efforts.

These results indicate local program exposure to the support efforts of the statewide media programs.

Summary

The California media campaign is a highly visible component in the overall Tobacco Control Program. In 1997 and 1998, funding was at a higher level than in the previous two years, there was a wide variety of advertisements available for circulation, and some of the ads, such as Voicebox (also known as Debi), were widely recognized and discussed.

A comparison of funding levels and exposure to the campaign for 1996 and 1998 suggests the program needs full funding in order to develop a varied and creative line-up of advertisements, with sufficient circulation to achieve high levels of exposure in all sectors of the population. Exposure was very high in 1998, reaching 93% of 8th-graders, 95% of 10th-graders, 91% of adults, and 95% of opinion leaders. The 1998 exposure levels were significantly higher than in 1996 for youth and opinion leaders, while campaign expenditures more than doubled. There was also a larger selection of advertisements available for circulation in 1997 and 1998.

Exposure to the general audience campaign was lower for certain sub-groups. Among English-speaking 8th-grade youth, the lowest exposure was among males, White respondents, and youth who identified their race or ethnicity as "Other." Among 10th-grade youth, it was lowest among Southeast Asians who spoke English. Among English-speaking adults, the lowest exposure was among older adults, those with less than a high school education, and Southeast Asian Americans. These results support the need to continue the ethnic specific campaign focused on Southeast Asians, and may indicate a need to reach other less-served population groups.

For some of the individual advertisements in the campaign, there was higher recall than for others. Among adults, recall was greatest for Voicebox and Waitress. Among youth, recall was greatest for Voicebox, Rain, Cattle, and Toilets. All of these ads ran on television. Television may generate better exposure and recall than radio or billboard advertisements, especially among youth.

Several of the ads were provocative and generated discussion among those exposed. Voicebox and Bob generated more discussion than other ads among adults, while Voicebox was discussed more often than other ads among youth.

Exposure to the media campaign was associated with several positive outcomes in the areas of ETS reduction, countering pro-tobacco influence, and reduction of tobacco use. Among those with greater media campaign exposure:

- Youth and adults were more likely to believe that ETS causes cancer
- Adults were more likely to ask others not to smoke
- Adults were more likely to prefer smoke-free bars, understand the reason for AB 13, and not want AB 13 overturned
- Youth and adults were more likely to have negative attitudes about the tobacco industry
- Youth were more likely to understand the consequences of smoking, have less susceptibility to smoking, a stronger belief they could refuse tobacco offers, and a lower perceived prevalence of peer smoking
- Youth were more likely to have lower past 30-day smoking

There was no indication that the campaign contributed to lower ETS exposure. Attempts to quit smoking were more likely among 8th-graders and adults exposed to the campaign, but not among 10th-graders.

Opinion leaders who saw or heard more of the campaign were more likely to believe tobacco is a problem, believe that tobacco ads influence youth, support tobacco regulations, and participate in local tobacco control activities. Relationships between campaign exposure and these outcomes were stronger when opinion leaders talked about the ads to which they were exposed compared to those who did not discuss the ads.

These results support a need for adequate funding, media placement and message design strategies that general high levels of campaign exposure, recall, and discussion.

CHAPTER 5

SCHOOL-BASED TOBACCO USE PREVENTION EDUCATION (TUPE) PROGRAM

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SCHOOL-BASED TOBACCO USE PREVENTION EDUCATION (TUPE) PROGRAM

Introduction

Since the inception of the California Tobacco Control Program, an average of 27% of annual program funds have been appropriated to public schools for implementation of school-based Tobacco Use Prevention Education (TUPE) interventions. TUPE program components include: (a) entitlements to school districts for in-school tobacco education, intervention, and cessation programs in grades four through eight; (b) a competitive grants program for tobacco education and cessation programs in grades nine through 12; (c) a competitive grants program for innovative projects in grades four through 12; and (d) funding to county offices of education for technical assistance and support to districts. The TUPE program is administered by the California Department of Education (CDE).

Beginning in fiscal year 1994-1995, schools were required to design their tobacco programs based on the *Guidelines for School Health Programs to Prevent Tobacco Use and Addiction*, published by the Centers for Disease Control and Prevention (CDC, 1994). The guidelines include the following:

1. Develop and enforce a school policy on tobacco use.
2. Provide instruction about the negative physiologic and social consequences of tobacco use, social influences on tobacco use, peer norms regarding tobacco use, and refusal skills.
3. Provide tobacco-use instruction in kindergarten through 12th grade. The instruction should be especially intensive in junior high/middle school and should be reinforced in high school.
4. Provide program-specific training for teachers.
5. Involve parents or families in support of school-based tobacco use prevention programs.
6. Support cessation efforts among students and all staff who use tobacco.
7. Assess the tobacco use prevention program at regular intervals.

This chapter presents findings from the Independent Evaluation of the school-based TUPE program. Data from the first and second waves of data collection overlapped with school years 1995-96, 1996-97, and 1997-98. The primary objectives of the chapter are to:

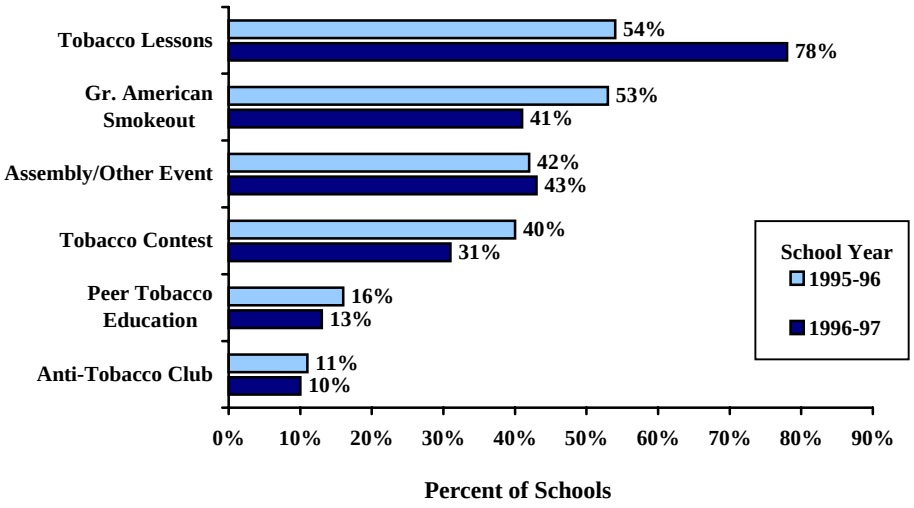
- Describe TUPE activities, programs, interventions, and policies implemented in a sample of schools in the 18 focal evaluation counties;
- Examine the extent to which schools implemented programs based on the 1994 CDC *Guidelines for School Health Programs to Prevent Tobacco Use and Addiction;*
- Examine changes in program outcomes from 1996 (Wave 1) to 1998 (Wave 2), and the extent to which those changes are related to program exposure; and
- Examine Wave 2 differences in program outcomes in TUPE Grantee high schools relative to Non-grantee high schools.

Program Implementation

Activities and Programs

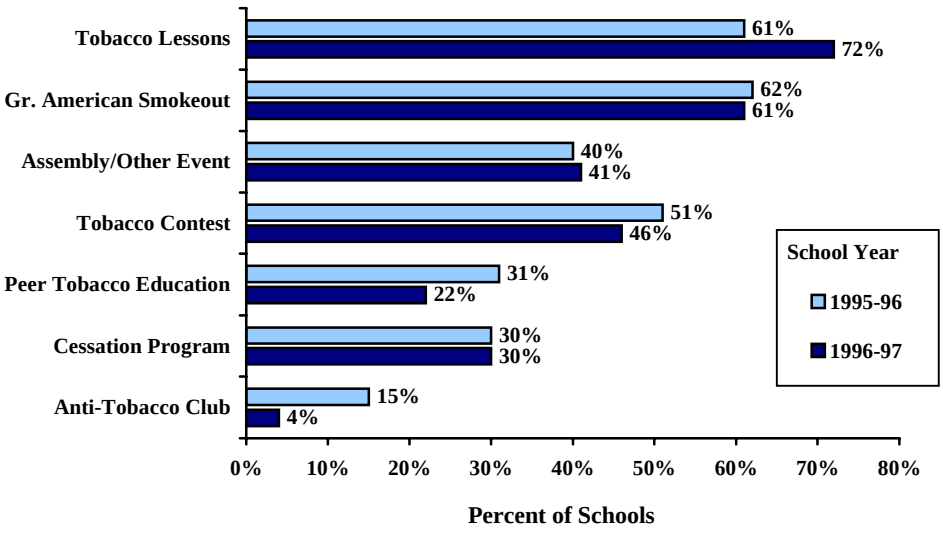
From school years 1995-96 to 1996-97, there was a significant increase in the mean percentage of 5th- grade teachers who taught at least one tobacco lesson (from 54% to 78%, p<.01). There was also a non-significant increase in the percentage of 8th-grade science and health teachers who taught at least one tobacco lesson (from 61% to 72%).[1] The prevalence of school wide activities, such as Great American Smokeout events, tobacco-specific contests and assemblies, peer education programs, and anti-tobacco clubs did not change significantly for either elementary or middle/junior high schools (see Figures 5-1 and 5-2).

Figure 5-1. Tobacco Use Prevention Education (TUPE) Activities Implemented in Elementary Schools



Source: Teacher and Principal Surveys, 1996 and 1998

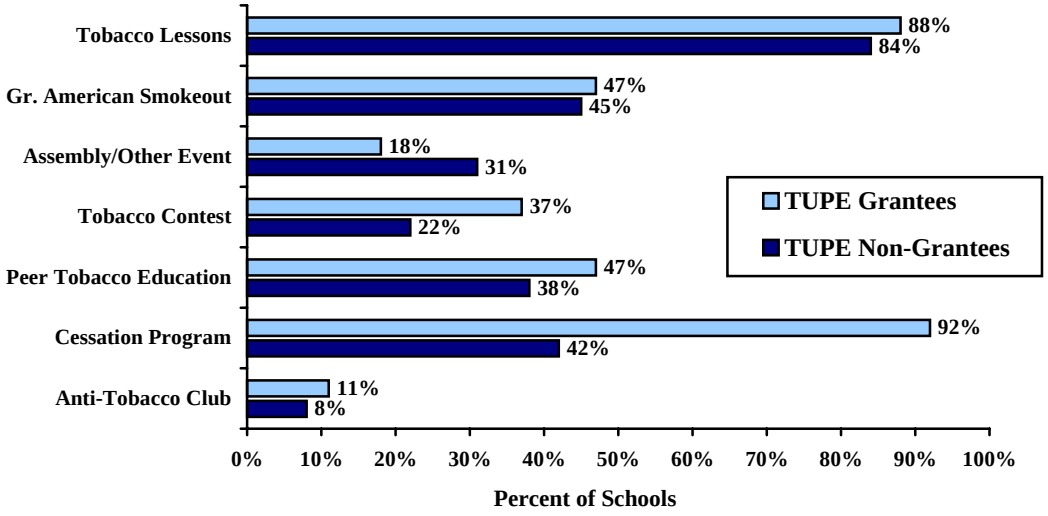
Figure 5-2. Tobacco Use Prevention Education (TUPE) Activities Implemented in Middle/Junior High Schools



Source: Teacher and Principal Surveys, 1996 and 1998

Comprehensive high schools that had TUPE grant funds in school year 1996-97 were significantly more likely to have a tobacco cessation program (92%) than were Non-grantee high schools (42%) ($p<.01$). However, the prevalence of tobacco lesson delivery by health and physical education teachers, and other school wide tobacco use prevention activities in comprehensive Grantee high schools did not differ significantly from that in Non-grantee high schools (see Figure 5-3).

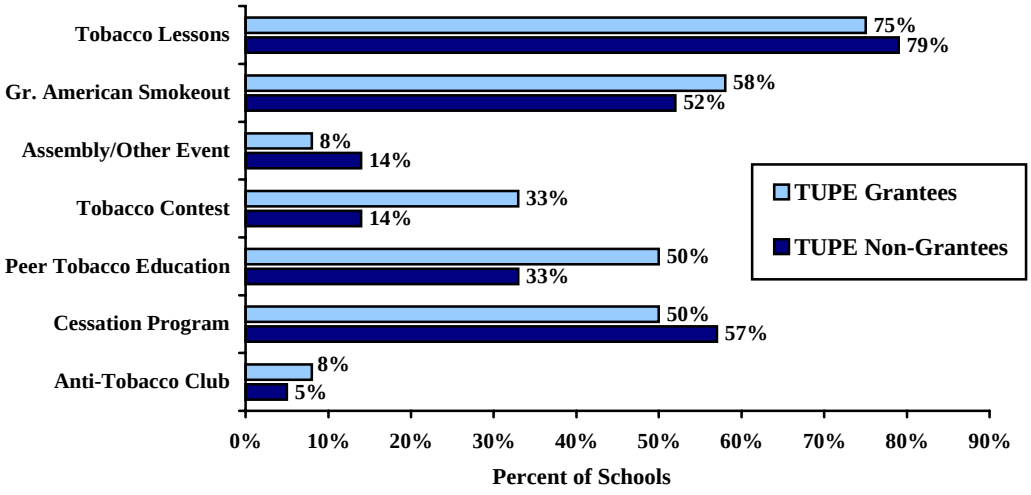
Figure 5-3. Tobacco Use Prevention Education (TUPE) Activities Implemented in Comprehensive High Schools during School Year 1996-97



Source: Teacher and Principal Surveys, 1998

Figure 5-4 shows the prevalence of TUPE activities in Grantee and Non-grantee continuation high schools. The prevalence of cessation programs in both types of schools (50% and 57%, respectively) was lower than that in comprehensive high schools. For all of these activities, the difference in prevalence between Grantee and Non-grantee high schools was not statistically significant.[2]

Figure 5-4. Tobacco Use Prevention Education (TUPE) Activities Implemented in Continuation High Schools during School Year 1997-98



Source: Continuation High School Teacher Survey, 1998

From school years 1995-96 to 1996-97, there was a significant decrease in the proportion of school districts that used tobacco curriculum materials developed by the American Cancer Society, American Heart Association, and/or American Lung Association (from 81% to 67%; $p<.05$). In school year 1996-97, the most common published curriculum used in districts was *Here's Looking at You, 2000*. The middle school version of *Tobacco Free*, an infusion curriculum distributed by CDE, was used in almost one-half (49%) of districts.

Application of CDC Guidelines

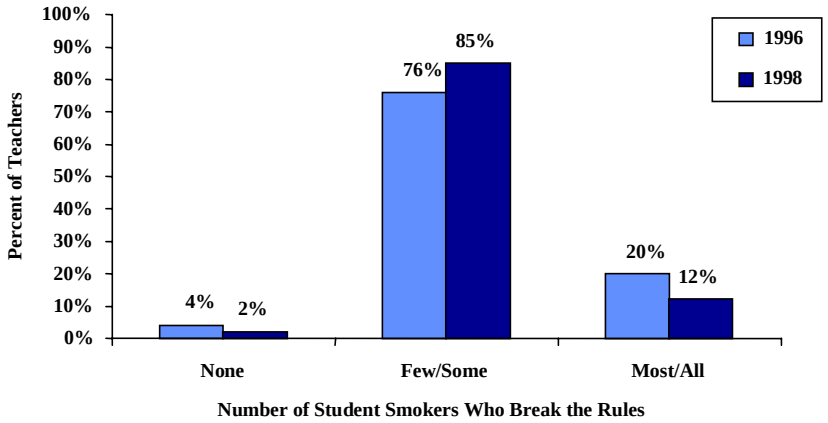
Below we present evidence regarding the extent to which each of the *CDC Guidelines for School Health Programs to Prevent Tobacco Use and Addiction* was applied in our sample of TUPE-funded California schools during the 1996-97 school year.

CDC Guideline #1: Develop and enforce a school policy on tobacco use.

As of February 1999, 97% of school districts in California had adopted a policy that prohibits the use of tobacco by all students, school staff, parents, and visitors in district-owned or leased buildings, on district grounds, and in district vehicles.[3] Effective July 1, 1995, the state legislature mandated that school districts are eligible to receive TUPE funds *only* if their school board has adopted such a policy.

From 1996 to 1998, there was an increase in teachers' perceptions of student compliance with tobacco-free policies in comprehensive high schools, although it was not statistically significant.[4] As shown in Figure 5-5, comprehensive high school teachers were less likely to report that "most" or "all" student smokers violate the policy (12%) in 1998 than in 1996 (20%). Among students in comprehensive high schools, perceived policy compliance did not change from 1996 to 1998, with 41% of 10th-grade students reporting that "most" or "all" student smokers violate the policy at their school. In continuation high schools, 40% of students and 18% of teachers reported that "most" or "all" student smokers violate the school tobacco-free policy.

Figure 5-5. Teachers' Perceptions of Student Violations of Tobacco-Free Policies at Comprehensive High Schools



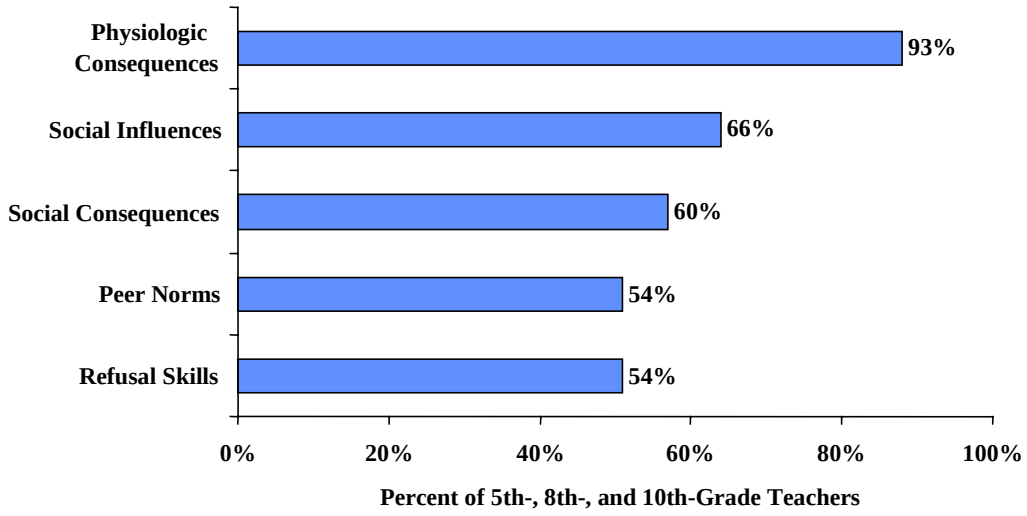
Source: Teacher Survey, 1998

From 1996 to 1998, most of the consequences for student violations of tobacco-free policies that middle/junior high and comprehensive high school administrators reported did not change significantly. In 1998, as in 1996, the most prevalent consequences were suspending or expelling student violators (84% of middle/junior high schools and 70% of high schools) and calling the students' parents (88% of middle/junior high schools and 69% of high schools). However, from 1996 to 1998 there was an increase in the percentage of schools that refer student violators to tobacco cessation programs (from 24% to 40% for middle/junior high schools, $p<.10$; from 40% to 51% for high schools, ns). In 1998, 7% of middle/junior high schools and 24% of high schools required violators to attend a "Saturday School" or other special tobacco education class.

CDC Guideline #2: Provide instruction about the negative physiologic and social consequences of tobacco use, social influences on tobacco use, peer norms regarding tobacco use, and refusal skills.

Among 5th-, 8th-, and 10th-grade teachers who provided tobacco lessons during school year 1996-97, the vast majority (93%) provided instruction about the negative physiologic consequences of tobacco use. Instruction about psychosocial factors related to tobacco use, including social influences (66%), social consequences (60%), peer norms (54%), and refusal skills (54%) was less common (see Figure 5-6). Compared to the 1995-96 school year, the prevalence of instruction about social influences in 1996-97 was significantly lower (from 71% to 66%; $p<.01$).

Figure 5-6. Topics Teachers Addressed in Tobacco Lessons during School Year 1996-97



Source: Teacher Survey, 1998

CDC Guideline #3: Provide tobacco-use prevention education in kindergarten through 12th grade. This instruction should be especially intensive in middle/junior high school and should be reinforced in high school.

During school year 1996-97, 8th-grade health and science teachers were about as likely to deliver at least one tobacco lesson (72%) as were 5th-grade teachers (78%). Rates of lesson delivery were slightly higher among health and physical education teachers in comprehensive high schools (86%) (see Figures 5-1 to 5-3). The mean number of hours that teachers reported spending on tobacco prevention lessons during the 1996-97 school year was six for 5th-grade teachers and seven for 8th-grade health and science teachers. The majority of 5th-grade teachers (69%) and 8th-grade health and science teachers (74%) believed that their district *expected* them to teach tobacco prevention lessons as part of their curriculum.

In both Grantee and Non-grantee comprehensive high schools, 10th-grade health and physical education teachers reported spending an average of seven hours on tobacco lessons during 1996-97. Health and physical education teachers in Grantee schools were more likely to believe that their district *expected* them to teach tobacco lessons (89%) than were those in Non-grantee schools (76%), although the difference was not statistically significant. In Grantee and Non-grantee continuation high schools, teachers reported spending an average of four and one-half hours on tobacco lessons during 1997-98. More teachers in Non-grantee continuation high schools (48%) believed they were expected to teach tobacco lessons than teachers in Grantee schools (33%), however the difference was non-significant.

The prevalence of tobacco-specific school-wide activities such as Great American Smokeout events and contests was greater in middle/junior high schools (61% and 46%, respectively) than in elementary schools (41% and 31%, respectively) and comprehensive high schools (46% and 30%, respectively) (see Figures 5-1 to 5-3). However, the literature on school-based tobacco education suggests that school-wide activities may be effective as *supplements* to tobacco instruction, but the delivery of psychosocial-based tobacco lessons is critical to affecting change in students' tobacco use behaviors (Glynn, 1989).

CDC Guideline #4: Provide program-specific training for teachers.

In 1998, only 23% of 5th-, 8th-, and 10th-grade teachers reported they had participated in tobacco-related in-service training during the previous five years, which is the same proportion as was reported in 1996. **However, among those teachers who had received tobacco-related training, 62% of 5th-grade teachers, 42% of 8th-grade teachers, 32% of comprehensive high school teachers, and 25% of continuation high school teachers had participated in *program-specific* training**. These rates are significantly higher than those reported in school year 1995-96 (11% of 5th-grade teachers and 17% of 8th- and 10th-grade teachers).

The majority of TUPE Coordinators (66%) reported that their district had sponsored or made available at least one in-service training on tobacco prevention education during 1996-97. Most districts (62%) also distributed tobacco education resources to teachers, such as pamphlets, fact sheets, curriculum ideas, and videos.

CDC Guideline #5: Involve parents or families in support of school-based tobacco use prevention programs.

Teachers reported they made few efforts to involve parents in tobacco prevention education during school year 1996-97. **Among teachers who provided at least one tobacco lesson, 81% of 5th- and 8th-grade teachers and 90% of comprehensive high school 10th-grade teachers had tried "not too much" or "not at all" to involve parents in tobacco education**. These efforts are not significantly different from those reported in school year 1995-96 (77%, 73%, and 84% of 5th-, 8th-, and 10th-grade teachers, respectively).

CDC Guideline #6: Support cessation efforts among students and all staff who use tobacco.

As shown in Figure 5-3, 92% of Grantee and 42% of Non-grantee comprehensive high schools had an on-site cessation program for students in school year 1996-97. However, in schools that had a program, regardless of TUPE grant status, only 31% of current student smokers were aware of the program. In those schools, 16% of teachers reported that they had referred at least one student to the program in the previous year. In the total sample of comprehensive high schools, 33% of teachers had received information about smoking cessation programs available to school staff.

Among continuation high schools, 50% of Grantee and 57% of Non-grantee schools had a cessation program for students (see Figure 5-4). In those schools, 33% of student smokers were aware of the program and 44% of teachers had referred at least one student to the program in the previous year. In the total sample of continuation schools, 29% of teachers had received information about cessation programs available to staff.

CDC Guideline #7: Assess the tobacco use prevention program at regular intervals.

The majority of TUPE Coordinators (80%) reported that their school district had evaluated its TUPE program within the past five years. Among the districts that had conducted an evaluation, the most common evaluation methods were student surveys and staff surveys.

Program Outcomes

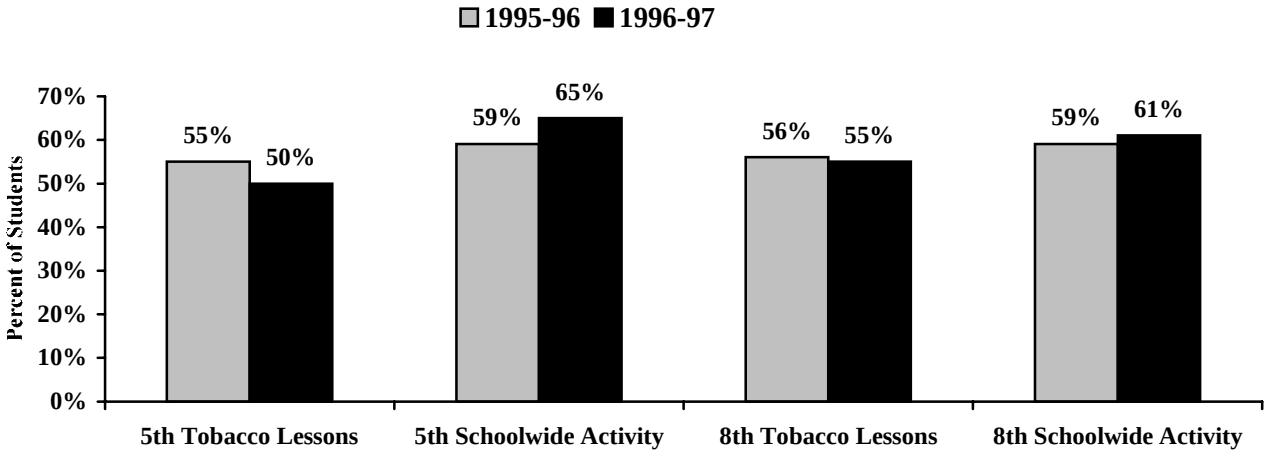
In this section of the chapter, we examine changes in program outcomes from 1996 to 1998 for 5th- and 8th-grade youth. For outcomes among comprehensive and continuation high school students, we focus on Wave 2 differences between those in TUPE Grantee and Non-grantee schools.[5]

Program Exposure

One-half of 5th-graders and 55% of 8th-graders reported being exposed to at least one tobacco lesson during the 1996-97 school year. More than two-thirds (65%) of 5th-graders and 61% of 8th-graders were exposed to at least one school wide tobacco-specific activity such as an assembly, contest, or a Great American Smokeout event (see Figure 5-7). Although the teacher data showed increases in the prevalence of lesson delivery from 1995-96 to 1996-97 (described above), student data showed significant decreases (55% to 50% for 5th-graders; 56% to 55% for 8th-graders; p's<.01). However, among 5th- and 8th-graders, there was a significant increase in recall of a tobacco-related school-wide event (59% to 65% for 5th-graders; 59% to 61% for 8th-graders, p's<.01).

Among high school youth, more students in TUPE Grantee schools reported exposure to tobacco lessons than students in Non-grantee schools (55% vs. 40% comprehensive, ns; 58% vs. 38% continuation; $p<.05$). Students in Grantee high schools were also more likely than students in Non-grantee high schools to report exposure to school-wide events (52% vs. 44% comprehensive, ns; 59% vs. 43% continuation, ns).

Figure 5-7. 5th and 8th Grade Students' Exposure to TUPE Activities



Source: Youth School-based Survey, 1998

Tobacco Use Prevalence[6]

From 1996 to 1998, the prevalence of 30-day cigarette smoking remained constant at 17% for 8th-graders and decreased slightly for 5th-graders (5.0 to 4.4%, ns). Among 10th-grade comprehensive high school students, the 30-day prevalence *decreased* **significantly from 27.8% to 21.8%** ($p<.01$) (see Table 5-1). The change among California 10th-graders is consistent with national data from the Monitoring the Future study, which showed a significant decline in 30-day smoking among 10th-graders from 30.4% in 1996 to 27.6% in 1998. The national study also showed a non-significant decline in 30-day smoking among 8th-graders (21% to 19%) (Johnston, et al., 1998). Among California 10th-graders and 5th-graders, there was a significant decrease in lifetime cigarette use (11.9% to 10.2% for 5th-graders, $p<.05$; 62.9% to 58.9% for 10th-graders; $p<.01$).

Among 10th-graders in comprehensive high schools, there was also a significant decrease in lifetime smokeless tobacco use (9.7% to 9.3%, $p<.05$). However, among 8th-graders, there were significant increases in lifetime smokeless tobacco use (5.9% to 8%, $p<.01$), 30-day smokeless tobacco use (3.1% to 4.1%, $p<.01$) and lifetime cigar use (27.7% to 29.1%, $p<.01$).

Table 5-1
Use of Tobacco Among
5th-Grade, 8th-Grade, and 10th-Grade Comprehensive High School Students,
1996 and 1998

	5th-Grade Students		8th-Grade Students		10th-Grade Students	
	1996	1998	1996	1998	1996	1998
Cigarette Use						
Lifetime	11.9%	10.2%*	45.3%	47.9%	62.9%	58.9%**
Past 30 Days	5.0	4.4	16.9	17.1	27.8	21.8**
Smokeless Tobacco Use						
Lifetime	2.8	2.9	5.9	8.0**	9.7	9.3**
Past 30 Days	2.4	2.1	3.1	4.1**	3.5	2.9
Cigar Use						
Lifetime	n/a	7.7	27.7	29.1**	38.7	37.4
Past 30 Days	n/a	2.6	n/a	10.8	n/a	13.2

Notes: n/a = question not asked of respondent type
* $p<.05$; ** $p<.01$

Table 5-2 shows the prevalence of tobacco use among comprehensive high school 10th-graders in TUPE Grantee vs. Non-grantee schools. None of the differences between the two groups of students was statistically significant.

Table 5-2
Use of Tobacco Among 10th-Grade Comprehensive High School Students, 1998, By TUPE Grantee Status

	TUPE Grantee High School Students	**TUPE Non-grantee High School Students**
Cigarette Use		
Lifetime	59.0%	58.7%
Past 30 Days	22.8	20.6
Smokeless Tobacco Use		
Lifetime	10.1	8.2
Past 30 Days	2.8	3.0
Cigar Use		
Lifetime	37.8	36.8
Past 30 Days	13.6	12.7

Rates of tobacco use were one and one-half to two times greater among continuation high school students (grades 9-12) than among comprehensive high school 10th-graders (see Table 5-3).[7] The vast majority of continuation high school students (89.4%) had smoked cigarettes at least once in their lifetime. **The prevalence of 30-day smoking among continuation high school students was 55.7%**. These prevalence rates are comparable to those reported in recent surveys of continuation high school students in Southern California (Sussman, et al., 1995) and alternative high school students nationwide (91% and 64% prevalence of lifetime and 30-day cigarette use, respectively, in 1998; Grunbaum, et al.,1999) . Table 5-3 also shows that more than one-fourth of continuation high school students (26.9%) reported smoking cigars in the 30 days prior to the survey. Comparisons of students in TUPE Grantee vs. Non-grantee schools showed that lifetime cigarette use was significantly higher among Grantee school students (91.2% vs. 88.2%, $p<.05$), but lifetime cigar use was marginally significantly lower among Grantee students relative to Non-grantee students (58.4% vs. 63.4%; $p<.10$).

Table 5-3
Use of Tobacco Among Continuation High School Students, 1999, By TUPE Grantee Status

	All Continuation High Students	TUPE Grantee School Students	TUPE Non-grantee School Students
Cigarette Use			
Lifetime	89.4%	91.2%	88.2%**
Past 30 Days	55.7	55.3	56.0
Smokeless Tobacco Use			
Lifetime	19.6	18.7	20.2
Past 30 Days	6.3	6.3	6.2
Cigar Use			
Lifetime	61.5	58.4	63.4*
Past 30 Days	26.9	25.3	27.9

Notes: * p<.10; ** p<.05

Tobacco Cessation

From 1996 to 1998, the percentage of 8th-grade and 10th-grade comprehensive high school smokers who had tried to quit smoking during the year prior to the survey increased significantly (53% to 66% for 8th-graders, p<.05; 46% to 63% for 10th-graders, p<.01).[8] In 1998, the prevalence of quit attempts in the previous year among 10th-grade smokers in comprehensive TUPE Grantee schools was significantly lower than that among smokers in Non-Grantee schools (59% vs. 71%, p<.01). In continuation high schools, 68% of smokers reported trying to quit in the previous year (64% in Grantee schools vs. 70% in Non-grantee schools; ns). The desire to quit was fairly high among smokers; in 1998, 45% of 8th-grade smokers, 55% of 10th-grade comprehensive high school smokers, and 64% of continuation high school smokers reported they would like to quit.

Beliefs About the Consequences of Tobacco Use

Among 5th-graders, from 1996 to 1998 there was a significant *decrease* in the percentage of students who agreed with specific statements about the positive consequences of tobacco use (p<.01).[9] For example, the percentage of 5th-graders who agreed that "smoking makes young people more relaxed" decreased from 28% to 20%. In both years, the vast majority of 5th-graders agreed with statements about the negative consequences of tobacco use. For example, in 1988, 88% agreed with the negative consequence statement, "smoking is one way to lose friends who are nonsmokers."

Among 8th-graders, there was a significant *increase* in the percentage who agreed with statements regarding the positive consequences of tobacco use (p <.01), and a significant *decrease* in the percentage who agreed with statements regarding the negative consequences of use (p<.01). For example, the percentage of 8th-graders who agreed that "smoking makes young people more relaxed" increased from 36% in 1996 to 43% in 1998. The percentage who agreed that "smoking is one way to lose friends who are nonsmokers" declined from 76% in 1996 to 68% in 1998.

Students in TUPE Grantee and Non-grantee comprehensive high schools did not differ in their beliefs about the positive and negative consequences of tobacco use. Among continuation high school students, there were stronger beliefs in the negative consequences of tobacco use in Grantee schools relative to Non-grantee schools ($p<.01$).

Perceived Peer Norms for Tobacco Use

The percentage of 5th-graders who believed that cigarette use is unacceptable among their peers increased from 1996 to 1998 ($p<.01$). In 1996, 66% and of 5th-graders believed that their peers "think it is *not* okay to smoke once in a while," increasing to 70% in 1998. However, among 8th-graders, the percentage who believed that cigarette use is unacceptable among their peers *decreased* from 29% in 1996 to 25% in 1998 ($p<.10$). Fifth-graders' mean estimates of the percentage of their peers who smoked in the previous 30 days remained stable at 23%, and 8th-graders' estimates increased nonsignificantly from 43% to 44%. In 1998, as in 1996, students' *estimates* of peer cigarette use were more than double the *actual* 30-day prevalence rates self-reported by students (5% and 17% for 5th- and 8th-graders, respectively).

In 1998, the percentage of 10th-grade students who believed that their peers find occasional smoking unacceptable was not significantly different in comprehensive TUPE Grantee (16%) vs. Non-grantee high schools (21%). In continuation high schools, students in Grantee schools (12%) were less likely to believe that smoking was unacceptable among peers than students in Non-grantee schools (14%, $p<.10$). The mean estimated prevalence of peer cigarette use was 50% in comprehensive high schools and 60% in continuation high schools (no differences by grantee status).

Tobacco Refusal Self-efficacy

From 1996 to 1998, there was a significant increase in the percentage of 5th- and 8th-graders who reported that it would be easy for them to say 'no' to friends' cigarette offers (66% to 69% for 5th-graders, $p<.05$; 76% to 79% for 8th-graders, $p<.01$). Among high schools, students in TUPE Grantee schools reported higher refusal self-efficacy (89% comprehensive, 84% continuation) than students in Non-grantee schools (87% comprehensive, 83% continuation), although the differences were not statistically significant.

Negative Attitudes Toward the Tobacco Industry

The percentage of 5th- and 8th-graders who reported negative attitudes toward the tobacco industry increased significantly from 1996 to 1998 ($p <.01$).[10] For example, 83% of 5th-graders agreed in 1998 that "tobacco companies use ads that are attractive to young people to try to get them to smoke," compared to 80% in 1996. Among 8th-graders, 89% agreed in 1998 that "tobacco companies try to get people addicted to cigarettes," compared to 83% in 1996. Students in Grantee comprehensive and continuation high schools were no more likely to have negative attitudes toward the industry than were students in Non-grantee high schools.

Tobacco-related Knowledge

From 1996 to 1998, tobacco-related knowledge scores increased among 8th-grade students, from a mean of 55% to 58% of knowledge items correct ($p<.01$).[11] Among 5th-grade students, the mean remained stable at 57% of items correct. In 1998, 10th-graders at comprehensive TUPE Grantee high schools had a significantly higher mean knowledge score (69% correct) than did 10th-graders at Non-grantee high schools (63% correct; $p<.05$). The knowledge scores among continuation high school students in Grantee schools (56% correct) did not differ significantly from those in Non-grantee schools (57% correct).

Program Effectiveness: Relationships Between Program Exposure and Changes in Outcomes

Finally, we examined relationships between program exposure during school year 1996-97 and changes in program outcomes from 1996 to 1998, for 5th- and 8th-grade students.[12] Among 5th-graders, greater program exposure was associated with changes in the prevalence of lifetime cigarette use, 30-day cigarette use, and lifetime smokeless tobacco use (p's <.05). Furthermore, there were marginally significant associations between program exposure and increases in tobacco refusal self-efficacy and tobacco knowledge (p's <,10). Among 8th-graders, program exposure was not significantly associated with any of the outcome indicators.

Summary

Program implementation data showed that there were increases in the proportion of elementary and middle/junior high school teachers who provided tobacco instruction to students in California schools from 1996 to 1998. Instruction about the physiologic consequences of tobacco use was more common than discussion of psychosocial factors related to tobacco, such as social influences, peer norms, and refusal techniques. Among comprehensive TUPE Grantee high schools, cessation programs for students were the most common TUPE activity. The only significant difference in the prevalence of tobacco-related activities between TUPE Grantee and Non-Grantee schools was that Grantee schools were more likely to have a cessation program. About half of the continuation high schools surveyed had cessation programs, and Grantees were no more likely than Non-Grantees to have a program. In both comprehensive and continuation high schools, only about one-third of student smokers were aware of their school's cessation program.

Nearly all of the school districts in the state have a policy prohibiting tobacco use. Data on perceptions of tobacco-free policy compliance suggests that student compliance in comprehensive high schools may be increasing. However, a substantial proportion of students still believe that many smokers violate the policy.

From 1996 to 1998, the 30-day prevalence of cigarette smoking decreased significantly among 10th-grade comprehensive high school students (27.8% to 21.8%), but it did not change significantly among 5th-grade (5%) and 8th-grade students (17%). In 1999, the majority of continuation high school students (55.7%) reported smoking in the past 30 days.

Among 5th-graders, there were significant improvements in: students' beliefs about the positive consequences of tobacco use, beliefs about the unacceptability of tobacco use, refusal skills, and negative attitudes toward the tobacco industry from 1996 to 1998. Program effectiveness analyses showed that exposure to TUPE activities was associated with several outcome indicators, including changes in lifetime cigarette smoking, 30-day cigarette smoking, and lifetime smokeless tobacco use (p's $<.05$) and changes in refusal skills and tobacco-related knowledge (p's $<.10$).

Among 8th-graders, there were significant increases in self-reported smoking cessation attempts, negative attitudes toward the tobacco industry, refusal skills, and tobacco-related knowledge. However, there were also changes in an unexpected direction, including an increase in students' beliefs about the positive consequences of tobacco use, a decrease in beliefs' about the negative consequences of use, and a decrease in perceived unacceptability of tobacco use. Program effectiveness analyses showed that exposure to TUPE activities was not associated with any changes in outcomes.

In 1998, there were no significant differences in outcomes among 10th-grade students in TUPE Grantee vs. Non-Grantee comprehensive high schools, except that students in Grantee schools had higher smoking-related knowledge than those in Non-Grantee schools. Also, there was an unexpected difference in regard to students' quit attempts in the past year, with higher rates of quit attempts among Non-Grantee students relative to Grantee students. In continuation high schools, students in Grantee schools had a higher prevalence of lifetime cigarette smoking, a lower prevalence of lifetime cigar use, and stronger beliefs in the negative consequences of tobacco use than did students in Non-Grantee schools. In addition, Grantee students were also less likely to believe that smoking is unacceptable among their peers.

CHAPTER 6

OVERALL IMPACT OF THE CALIFORNIA TOBACCO CONTROL PROGRAM

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OVERALL IMPACT OF THE CALIFORNIA TOBACCO CONTROL PROGRAM

The previous chapters in this report have described the effects of specific tobacco control program components--the media campaign, community programs, and school-based tobacco prevention--on the attitudes and behaviors of Californians. Each chapter has focused on a specific type of program component, examining the associations between program exposure and tobacco-related outcomes. This information provides an understanding about which specific program components have influenced which specific outcomes.

However, the California Tobacco Control Program (TCP) is a comprehensive, multifaceted program. The goal of the TCP is to change social norms—to make smoking less desirable, less acceptable, and less accessible (California Department of Health Services, 1998). Therefore, California has implemented numerous tobacco control activities and strategies, all designed to reinforce the message that smoking is not a "normal" behavior in our society. Many Californians are exposed to more than one component of the TCP. Theoretically, if people are exposed to tobacco control messages through multiple program components, they will be more likely to internalize these messages and more likely to change their attitudes and behaviors. It is therefore important to examine the effectiveness of the TCP as a whole.

It is important to determine whether California youth and adults are actually receiving tobacco control messages through multiple components, and if so, whether this results in social norm changes over time. It is also important to determine whether certain segments of the California population are not being reached by tobacco control messages.

In this chapter, we examine the effects of exposure to the TCP through multiple components. We define a measure called Multi-Component Exposure, which represents the percent of respondents in each county who were exposed to tobacco control programs through more than one component. We then examine whether counties with higher Multi-Component Exposure showed greater changes in tobacco-related attitudes and behaviors than counties with lower Multi-Component exposure.

Goals of This Chapter

1. To determine the percentage of California youth and adults were exposed to tobacco control messages through multiple components (media campaign, community programs, and school programs)
2. To determine whether California youth and adults in specific demographic groups were more likely to be exposed to tobacco control messages through multiple components
3. To determine whether a county's level of Multi-Component Exposure is associated with county-level changes in tobacco attitudes and behaviors from 1996 to 1998

Measurement of Program Exposure

In our youth and adult surveys, we asked respondents whether they recalled being exposed to the following programs and activities:

Table 6-1
Tobacco Control Programs and Activities
From the Three Components

Component	Youth	Adults
School	Tobacco prevention lessons Tobacco-specific guest speakers Tobacco-specific assemblies/events Great American Smokeout/Smoke Scream	N/A
Media	Specific Ads: Voicebox Rain Baby Blocks Bob, I've Got Emphysema Cattle Thank-You Speech Toilets	Specific Ads: Voicebox Rain Baby Blocks Bob, I've Got Emphysema Chad, How Many? Waitress
Community	Great American Smokeout World No-Tobacco Day Stings 1-800-5-ASK-4-ID Operation Storefront Efforts to reduce tobacco sponsorship Efforts to pass laws restricting tobacco advertising in stores or on billboards Efforts to encourage people to establish home/car no-smoking policies Programs to prevent youth access from social sources Programs to prevent youth access from retail sources Smoking cessation programs Ban on smoking in restaurants and work places	Great American Smokeout World No-Tobacco Day STAKE Act merchant education program Stings 1-800-5-ASK-4-ID Operation Storefront Efforts to reduce tobacco sponsorship Efforts to pass laws restricting tobacco advertising in stores or on billboards Efforts to encourage people to establish home/car no-smoking policies Programs to prevent youth access from social sources Efforts to make cigars seem less glamorous Efforts to enforce AB 13

From these measures, we determined the percent of respondents in each county who were exposed to the TCP through two or more components. For example, a person may have seen the "Voicebox" media ad and also heard about the Great American Smokeout. We found differences among counties in the percent of respondents (adults and youth) who reported program exposure through multiple components. We then determined the effects of exposure to multiple TCP components, which we call Multi-Component Exposure, by examining associations between county-level exposure and program outcomes.

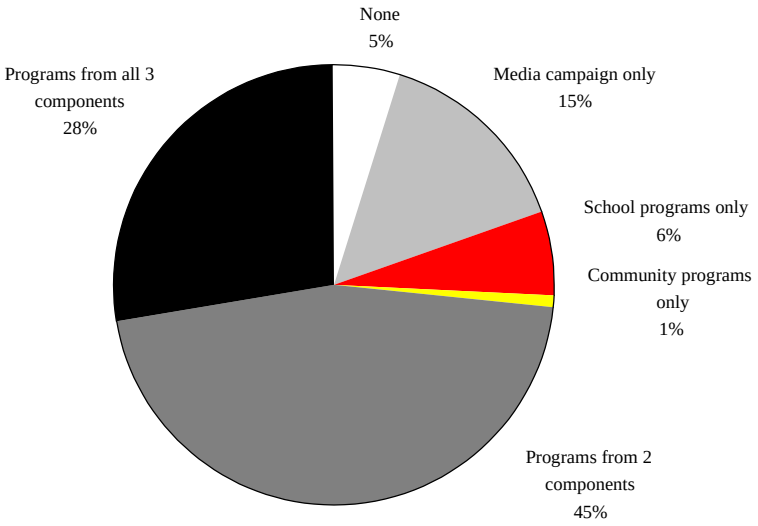
Multi-Component Exposure = the percent of respondents in a county who reported that they were exposed to the TCP through two or more different components (school, media, and community).

Recall of Exposure to Tobacco Control Programs Among Youth and Adults

Most Californians were exposed to tobacco control messages through at least two different components. Figures 6-1 through 6-3 show the percent of California youth and adults who recalled exposure to the tobacco control media campaign, community programs, and school programs. Only 5% of 8th-graders, 4% of 10th-graders, and 2% of adults did not report exposure to any programs. Most Californians (73% of 8th-graders, 84% of 10th-graders, and 80% of adults) were exposed to tobacco control programs through two or more components.

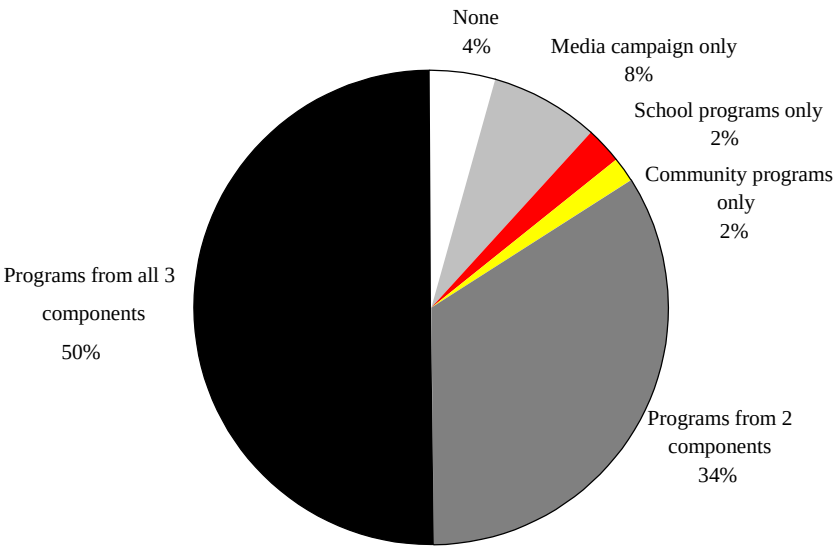
Among adults, this high level of TCP exposure was largely due to the Waitress ad and efforts to enforce AB 13. Among adults who reported exposure to the media campaign, 95% had seen the Waitress ad. Among adults who reported exposure to community programs, 76% reported that they had heard about efforts to enforce AB 13.

Figure 6-1. Exposure to the Tobacco Control Program Through Multiple Components - 8th-Grade Youth, 1998



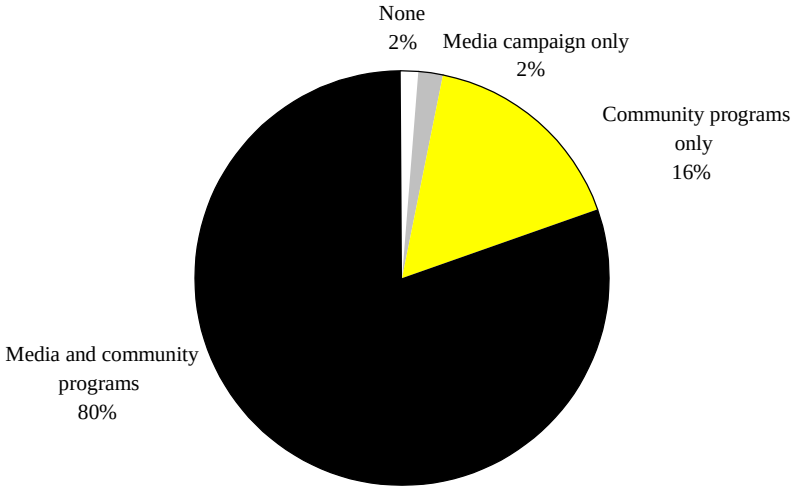
Source: School-based Youth Survey, 1998

Figure 6-2. Exposure to the Tobacco Control Program Through Multiple Components - 10th-Grade Youth, 1998



Source: School-based Youth Survey, 1998

Figure 6-3. Exposure to the Tobacco Control Program Through Multiple Components - Adults, 1998

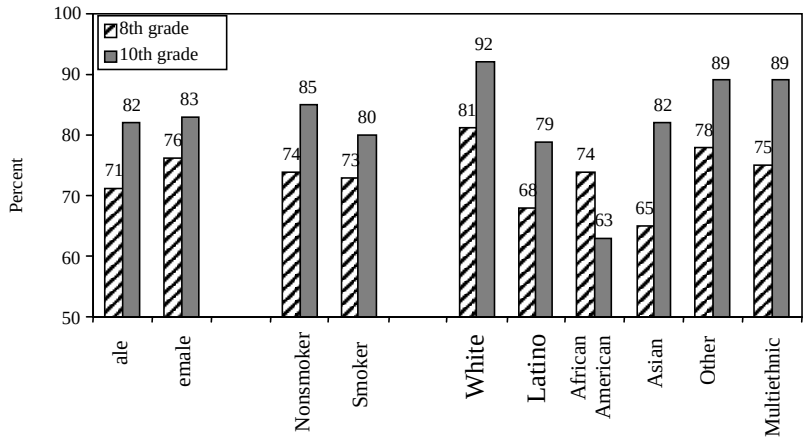


Source: Adult Telephone Survey, 1998

Demographic Characteristics of Californians Who Were Exposed to Tobacco Control Messages Through Multiple Components

Among youth, nonsmokers and whites were most likely to be exposed to tobacco control messages through multiple components. As shown in Figure 6-4, 8th-grade girls were more likely to have been exposed to tobacco control programs through multiple components than were 8th-grade boys ($p<.01$). Tenth-grade youth were more likely to be exposed to tobacco control programs through multiple components if they were nonsmokers than if they were smokers ($p<.01$). Ethnic minority youth in 8th and 10th grades were less likely to be exposed to tobacco control programs through multiple components than were whites ($p<.01$). Even though ethnic minority adolescents have a lower smoking prevalence than do white adolescents, recent evidence suggests that smoking rates are increasing among minority youth (U.S. Department of Health & Human Services, 1998). Thus, TCP efforts should continue to target minority youth. In addition, because white male adolescents are most likely to smoke, it may be advisable to target more tobacco control programs to boys.

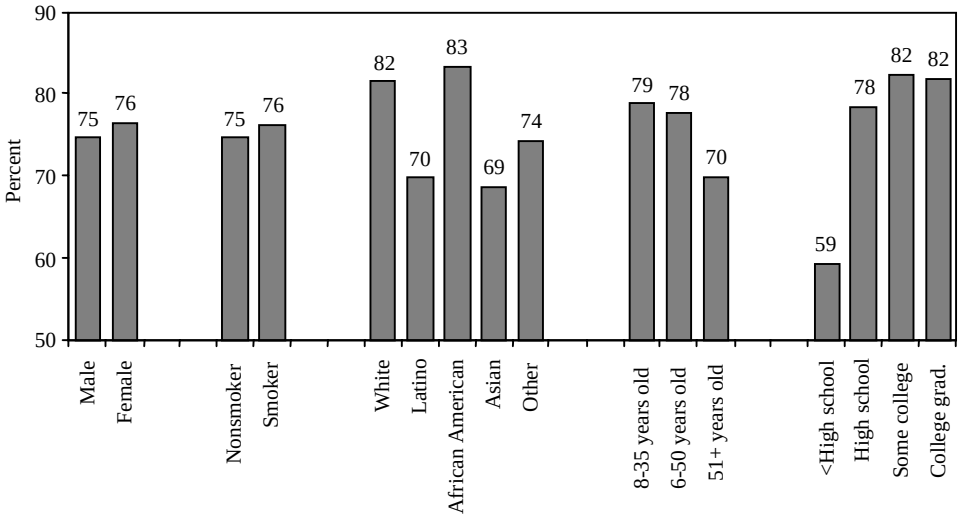
Figure 6-4.
Percent of Youth Who Were Exposed to Tobacco Control Programs Through Two or More Components



Source: School-based Youth

Among adults, exposure to tobacco control programs through multiple components varied significantly by ethnicity, age, and education. As shown in Figure 6-5, white and African American adults were more likely to be exposed to tobacco control programs through multiple components than were adults of other ethnicities ($p<.01$). Hispanic and Asian American adults were the least likely to be exposed to tobacco control programs through multiple components. Even though these groups have a lower smoking prevalence than do white and African American adults, results in Chapter 3 suggest that Hispanics are at higher risk for exposure to ETS at work. Thus, it is important that tobacco control programs continue to target minority adults. Exposure to tobacco control programs through multiple components was most likely among respondents ages 50 years or younger ($p<.01$) and among respondents with at least a high school education ($p<.01$). Adults with less than a high school education tend to have a higher smoking prevalence than more educated adults, so this group may be an important target for tobacco control efforts.

Figure 6-5.
Percent of Adults Exposed to Tobacco Control Programs
Through Multiple Components

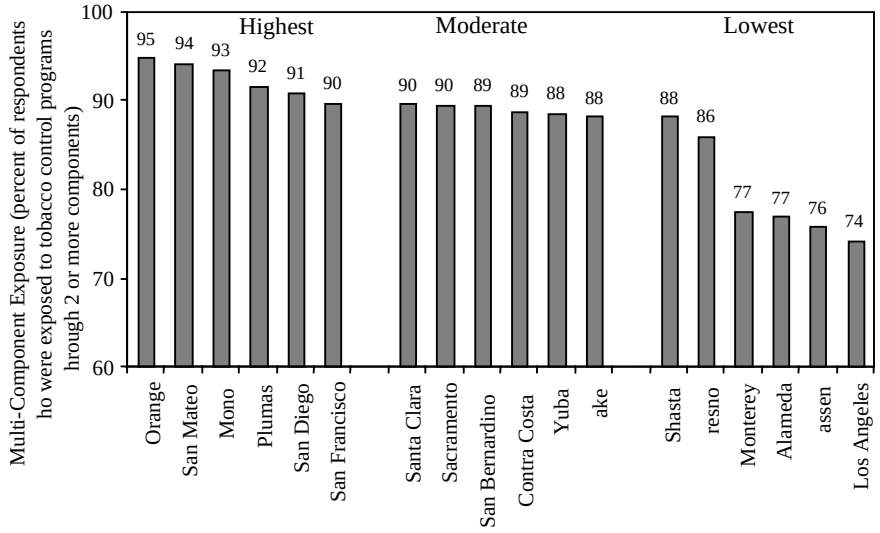


Source: Adult Telephone Survey, 1998

County-Level Variation in Multi-Component Exposure

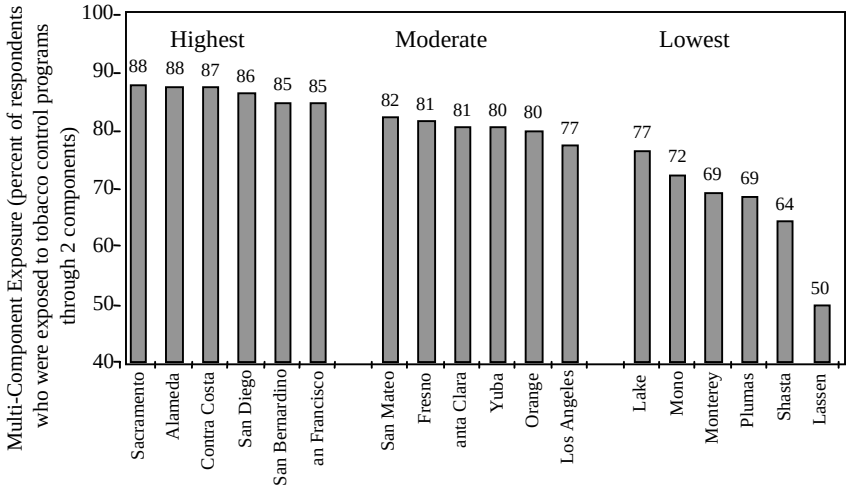
For the purposes of this report, we divided the 18 focal counties into three groups: the six counties with the highest Multi-Component Exposure, the six counties with the lowest Multi-Component Exposure, and the six counties with moderate Multi-Component Exposure. This was done separately for youth and adults. Figures 6-6 and 6-7 show the levels of Multi-Component Exposure in each focal county.

Figure 6-6.
Multi-Component Exposure in the 18 Focal Counties - 10th-GradeYouth



Source: School-based Youth Survey, 1998

Figure 6-7.
Multi-Component Exposure in the 18 Focal Counties - Adults



Source: Adult Telephone Survey, 1998

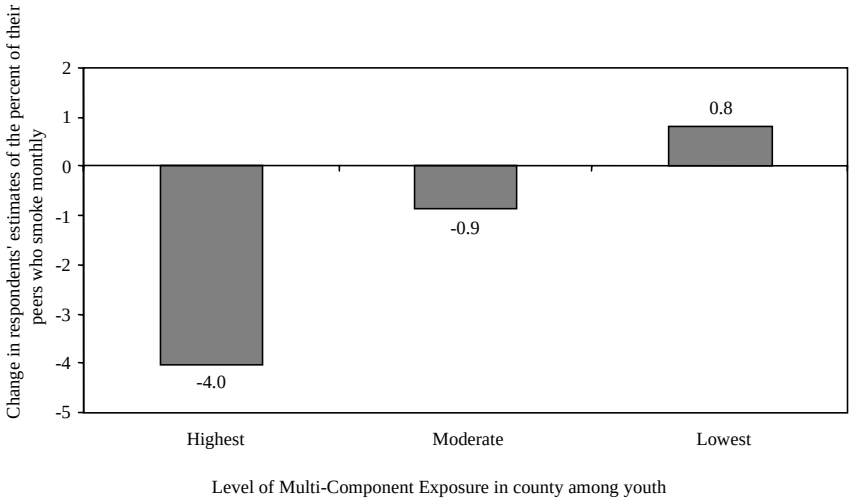
Associations Between County-Level Multi-Component Exposure and Changes in Tobacco-Related Outcomes Between 1996 and 1998

To determine the effect of Multi-Component Exposure on tobacco-related behaviors and social norms, we examined the county-level associations between Multi-Component Exposure and key outcome variables[1]. For each county, we calculated the change (difference) between 1996 and 1998 in outcomes. We then used correlation analyses to evaluate the association between Multi-Component Exposure and 1996-1998 changes in these key outcome variables[2]. A strong association indicates that counties with higher levels of Multi-Component Exposure showed greater change in outcomes than did counties with lower levels of Multi-Component Exposure.

Youth Outcomes

In counties with the highest Multi-Component Exposure, there were greater decreases in 10th-graders' perceived peer smoking norms (effect size=.29, small to moderate effect size). Youth tend to overestimate the prevalence of smoking among their peers, and they may smoke in an attempt to be accepted by their peers. Therefore, if a tobacco control program can decrease youths' estimates of smoking prevalence among their peers, the youth may be less likely to experiment with smoking. We examined changes in estimates of peer smoking prevalence between 1996 and 1998 in the 18 focal counties, as shown in Figure 6-8. In counties with the highest Multi-Component Exposure, the average estimate of smoking prevalence among peers decreased by four percentage points between 1996 and 1998. In counties with the lowest or moderate Multi-Component Exposure, estimates of smoking prevalence among peers remained constant or increased slightly.

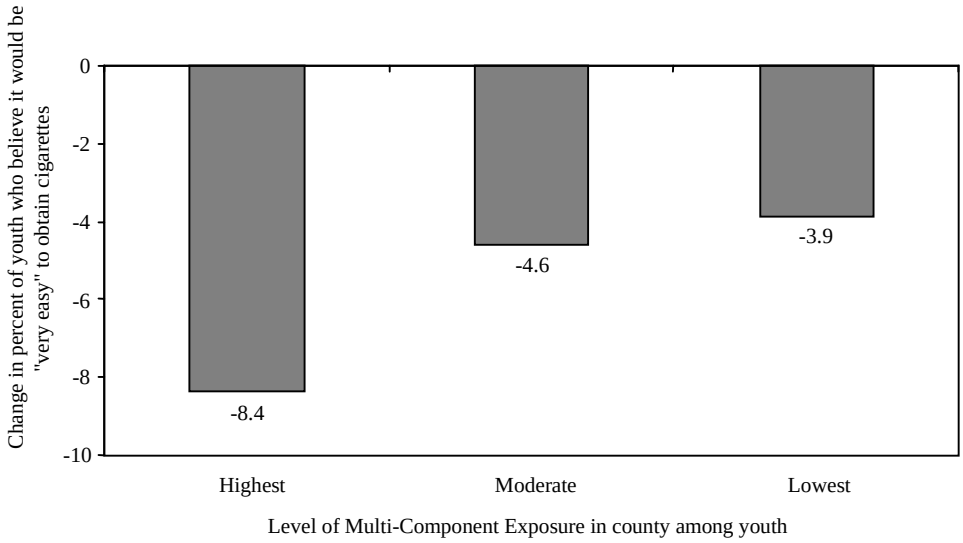
Figure 6-8.
Change in 10th-Graders' Estimates of Smoking Prevalence Among Peers



Source: School-based Youth Survey, 1996-1998

Perceived access to cigarettes among 10th-grade youth declined more in counties with the highest Multi-Component Exposure. A major goal of the TCP is to decrease youth access to tobacco. We therefore examined changes between 1996 and 1998 in the percent of youth who reported easy access to tobacco. As described in the previous chapters in this report, youth access to tobacco declined throughout California. However, as shown in Figure 6-9, the percent of 10th-graders who believed that it would be "very easy" to obtain cigarettes declined the most in counties with the highest Multi-Component Exposure (effect size=.30, small to moderate effect size).

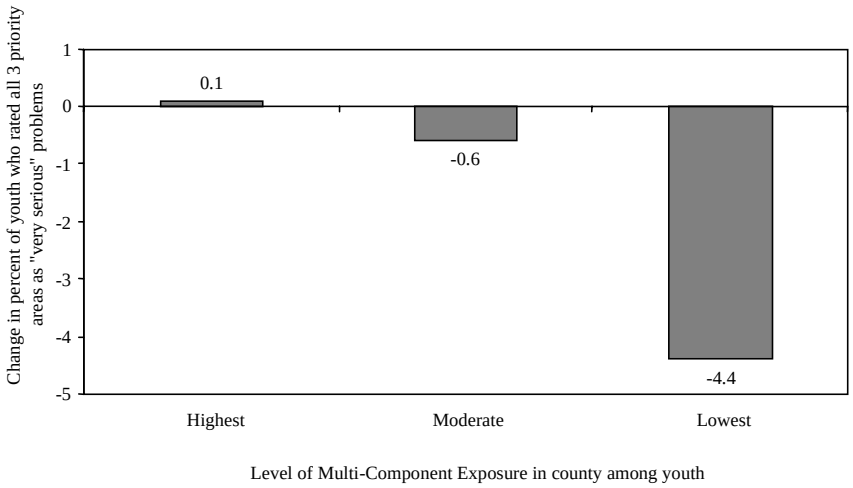
Figure 6-9.
Change in Perceived Access to Cigarettes
Among 10th-Graders



Source: School-based Youth Survey, 1996-1998

In counties with the lowest or moderate Multi-Component Exposure, 8th-graders' perceived importance of tobacco-related issues declined from 1996 to 1998. In counties with the highest Multi-Component Exposure, this decline did not occur. We asked youth how serious of a problem they believed each of the three TCS priority areas to be. Figure 6-10 shows the changes from 1996 to 1998 in the percent of 8th-grade youth who rated all three-priority areas as "very serious" problems. In counties with the highest Multi-Component Exposure, perceived importance remained constant. However, in counties with the lowest or moderate Multi-Component Exposure, the perceived importance of these issues declined among 8th-graders (effect size=.45, small to moderate effect size, $p<.10$).

Figure 6-10.
Change in Perceived Importance of TCS Priority Areas Among 8th-Grade Youth

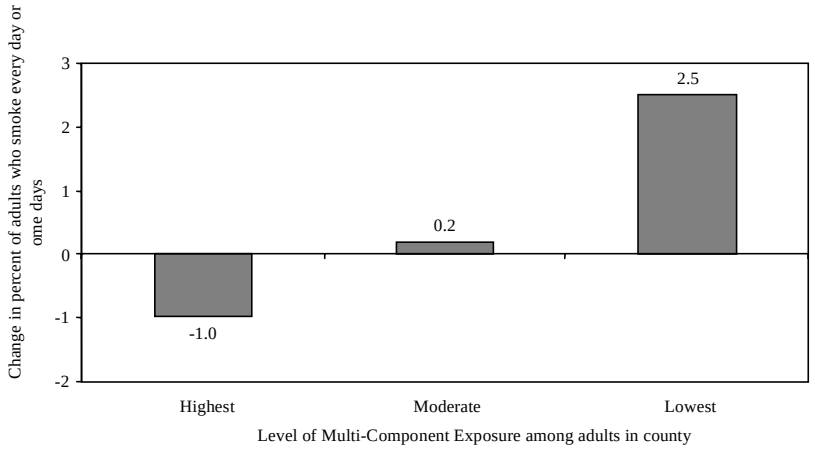


Source: School-based Youth Survey, 1996-1998

Adult Outcomes

In counties with the highest Multi-Component Exposure, adult smoking prevalence declined. In counties with the lowest or moderate Multi-Component Exposure, adult smoking prevalence remained constant or increased. As shown in Figure 6-11, Multi-Component Exposure was significantly associated with declines in adult smoking prevalence (effect size=.54, moderate effect size, $p<.05$). Decreases in smoking prevalence between 1996 and 1998 were observed mainly in counties with higher Multi-Component Exposure.

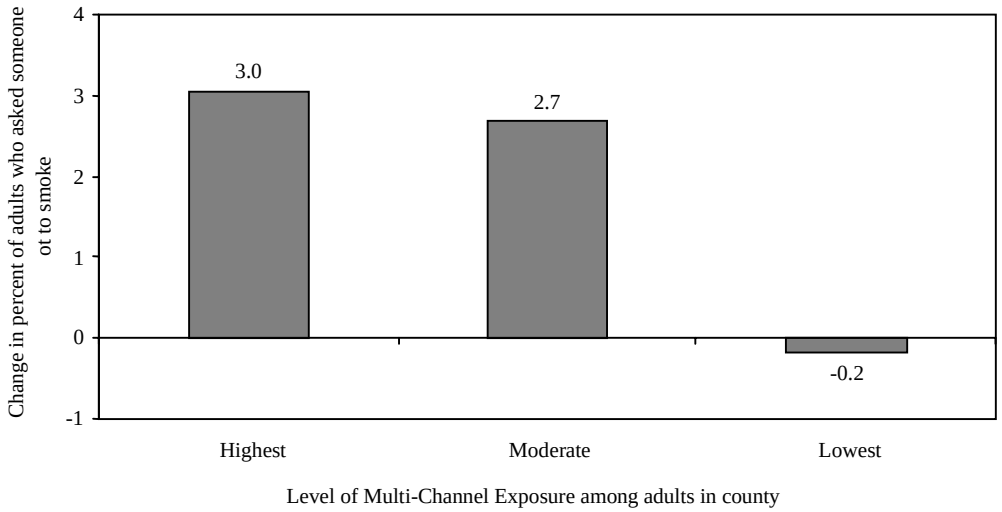
Figure 6-11.
Change in Adult Smoking Prevalence



Source: Adult Telephone Survey, 1996-1998

In counties with the highest Multi-Component Exposure, there were increases in the percent of adults who asked someone else not to smoke. Another goal of the TCP is to decrease the acceptability of cigarette smoking. As the acceptability of cigarette smoking decreases, California residents may feel more empowered to ask other people not to smoke in their presence. As shown in Figure 6-12, the rate of asking someone else not to smoke increased in counties with moderate or the highest Multi-Component Exposure, while it remained stable in counties with the lowest Multi-Component Exposure (effect size=.38, small to moderate effect).

Figure 6-12.
Change in Percent of Adults who Asked Someone Else Not to Smoke



Source: Adult Telephone Survey, 1996-1998

Summary

Nearly all Californians have been exposed to at least one component of the TCP. The vast majority of 8th-grade youth (95%), 10th-grade youth (96%), and adults (98%) recalled at least one tobacco control activity, media spot, or policy.

Most Californians are receiving tobacco control messages through multiple components. The TCP appears to be achieving its goal of providing a comprehensive, multifaceted program to California residents. Approximately four out of five Californians reported that they were exposed to tobacco control messages through two or more components in 1998.

Counties with greater Multi-Component Exposure showed greater changes in tobacco-related attitudes and behaviors. In counties with higher levels of Multi-Component Exposure, we observed the following changes from 1996 to 1998:

- Decrease in 10th-graders' estimates of smoking prevalence among their peers
- Decrease in 10th-graders' perceived access to cigarettes
- Maintenance of 8th-graders' perceived importance of tobacco-related issues
- Decrease in adult smoking prevalence
- Increase in percent of adults who asked someone else not to smoke

Certain demographic groups are less likely to be exposed to tobacco control messages through multiple components. Among youth, the following groups are least likely to be exposed to tobacco control messages through multiple components:

- Smokers
- African Americans
- Hispanics
- Asian Americans

Among adults, the following groups are least likely to be exposed to tobacco control messages through multiple components:

- Hispanics
- Asian Americans
- Adults over 50 years of age
- Adults with less than a high school education
- Adults living in rural counties

Among youth and adults, whites were especially likely to have been exposed to tobacco control messages through multiple components. Although African American adults were very likely to have been exposed to tobacco control messages through multiple components, African American youth were not. Because African American youth are at lower risk of smoking initiation relative to whites and Hispanics, they have not been targeted extensively by tobacco control programs in California. Among both youth and adults, Hispanics and Asian Americans were less likely to have been exposed to tobacco control messages through multiple components, relative to whites. However, we did not measure exposure to the Spanish-language and Asian-language billboards and TV ads, so we may have underestimated Multi-Component Exposure in these groups.

CHAPTER 7

RECOMMENDATIONS

The Tobacco Marketing Environment in California

1. African American and Hispanic organizations need to counter the spread of positive tobacco corporate images in their newspapers, and the association of tobacco support and philanthropic organizations in newspaper ads. These marketing efforts help build corporate name recognition and paint the corporations with a veneer of respectability and community concern.
2. Tobacco-sponsored bar and club nights are increasing and incorporating more special events into their media advertising. They are aimed at young adults. This form of marketing needs to be addressed by TCS, local grantees, and Project Smart $ participants to counter the takeover of the urban evening entertainment scene by tobacco, and to shine a spotlight on the industry's effort to market to young adults. TCS agencies also need to work with six of the newspapers that have the highest rates of tobacco advertising, to counter these promotional campaigns. Bar and club events should be monitored and changes tracked, after the Master Settlement Agreement curtails other forms of advertising.
3. The Attorneys General need to clarify the terms of the Master Settlement Agreement that restrict tobacco advertising in magazines with substantial youth readership, and TCS-supported agencies need to encourage these magazines to comply. TCS should consider placing CPTI ads in young adult magazines with high California readership.
4. After the Master Settlement Agreement goes into effect, tobacco-sponsored events will most likely continue in California, probably with a larger proportion of events receiving their funds at the national rather than the local level. Project Smart $ can help mobilize efforts to monitor these events, devise strategies that will preempt national sponsorships, and work with the Attorneys General to enforce compliance and reduce loopholes.
5. Tobacco advertising inside retail outlets is not restricted by the Master Settlement Agreement. We expect stores will be used as a major marketing channel, and should be closely monitored for tobacco advertising prevalence and changes over time. TCS should explore legal and community remedies for countering this form of advertising. In addition, restrictions on tobacco company incentives paid to retailers should be discussed at the state and national levels.

Local Tobacco Control Programs

Countering Pro-Tobacco Influences (CPTI)

1. The TCP should continue to conduct CPTI activities with special attention focused on those groups who are least aware of CPTI activities: adults living in rural areas, youth, and young adults.
2. The TCP should build upon the significant increase in the initiation and passage of local tobacco advertising and marketing restrictions to further CPTI goals.
3. To increase public support for restrictions on tobacco advertising and marketing, local TCP agencies should capitalize on the public's and opinion leaders' concern about the amount of tobacco advertising and marketing in their communities. TCS-funded agencies should also capitalize on the public's skepticism about the tobacco industry's practices.
4. The TCP should push for vigorous enforcement of CPTI policy restrictions.
5. The TCP should continue to monitor in-store tobacco advertising.

Reducing Exposure to Environmental Tobacco Smoke (ETS)

1. The TCP should devote special attention to the 45% of smoking parents who do not have a total ban on home smoking. Likewise, the two-thirds of smoking parents without a complete ban on smoking in their family cars need targeted programming.
2. Programs to reduce the number of youth who are exposed to ETS in indoor settings (homes and elsewhere) and cars are needed since one-third of youth are exposed on one or more days per week.
3. Nonsmokers at higher risk for exposure to ETS at home every day (African Americans and those 18-24 years old) need to be educated about the risks they are taking for themselves and their families.
4. Further investigation is needed to understand why nearly one-fourth of nonsmoking workers are exposed to ETS at work and why Hispanics and those with lower education receive daily doses of ETS at work.
5. It may be that a social norm has developed whereby both smokers and nonsmokers see smoking in hotel lobbies and bus shelters to be unacceptable. The TCP should explore the policy implications of this issue further.
6. The TCP should continue to encourage collaboration between TCP-funded agencies and enforcement agencies, in order to generate higher rates of enforcement on the smoke free bar law and other public no-smoking policies.

Reducing Youth Access to Tobacco Products (YA)

1. Even though the statewide rate of illegal sales to minors has dropped substantially, the majority of youth report it is still easy for them to find a store that would sell them tobacco. Efforts to identify these stores and reduce their illegal sales rates are needed.
2. Since frequent stings are an effective deterrence to illegal sales to minors, the TCP should seek to stimulate local enforcement agencies to conduct stings at retail outlets.
3. It will be important for TCS to continue investigating what intervention efforts are effective in reducing youth access from social sources. Intervention campaigns should focus their resources on friends and young adult smokers as the primary social source providers.
4. The TCP should be alert to any new research about the effectiveness of efforts to crack down on youth for the possession of tobacco products, and based on the empirical evidence, engage in appropriate program responses.

The Statewide Media Campaign

1. TCS needs to consider whether the reach of the general audience media campaign is adequate for English-speaking Southeast Asian 10th-graders and adults, Caucasian 8th-graders, older adults and adults with less than a high school degree.
2. The California media campaign is strong in messages focused on countering pro-tobacco influence and reducing ETS, but needs to focus more efforts on youth access, if this issue remains a primary focus.
3. The California media campaign needs full funding in order to develop a varied and creative line-up of advertisements, with sufficient circulation to achieve high levels of exposure in all sectors of the population.
4. The TCP should continue to use media placement and message design strategies that generate high levels of campaign exposure, recall and discussion among key opinion leaders, since this in turn is associated with stronger support for tobacco control policies and activities.

School-based Tobacco Use Prevention Education (TUPE) Program

1. Now that the vast majority of school districts in California have developed tobacco-free policies, schools should continue to emphasize compliance with, and enforcement of those policies.
2. The CDC recommends that tobacco prevention education be especially intensive during the middle/junior high school years. Although there was an increase between 1996 and 1998 in the proportion of middle/junior high school teachers who reported delivering tobacco prevention lessons, the prevalence of tobacco instruction and related activities was no greater in middle/junior high schools than elementary and high schools. Furthermore, there was no evidence that current tobacco programs in middle/junior high schools are changing students' attitudes and behaviors. CDE should continue efforts to disseminate effective, research-based curriculum materials to middle/junior high school teachers and provide program-specific training to prepare them to implement these programs.
3. Tobacco instruction is still more likely to address the physiologic consequences of tobacco use than psychosocial factors that are associated with tobacco use, such as beliefs about peer norms, refusal skills, and social influences on tobacco use. Effective tobacco programs that focus on psychosocial factors should continue to be emphasized and disseminated by CDE.
4. Although significantly more TUPE Grantee high schools had cessation programs than did Non-grantee high schools, student smokers in Grantee schools were equally as unlikely to know about the programs as smokers in Non-Grantee schools. Furthermore, smokers in Grantee schools were *less* likely to report they had tried to quit in the past year than were smokers in Non-grantee schools. High schools that receive competitive grants should continue to receive technical assistance on effective approaches to tobacco cessation and prevention at the high school level. CDE should continue to emphasize local evaluation of high school programmatic approaches.
5. The evaluation results indicate that more than one-half of continuation high school students are current smokers. In addition, cessation programs are as common in TUPE Grantee continuation high schools as in Non-grantee continuation and comprehensive high schools. CDE should continue to make competitive grant funds available to schools that serve these high-risk students, and encourage schools to develop cessation programs based on effective models.

Overall Impact of the California Tobacco Control Program

1. TCS should continue its efforts to disseminate tobacco control messages to all Californians through multiple components. The analyses described in this chapter demonstrate that the more that counties disseminated tobacco control messages through multiple components, the greater the changes in tobacco-related attitudes and behaviors we observed among their residents. This indicates that exposure to multiple tobacco control messages may reinforce the messages and produce more behavior change.
2. Greater efforts are needed to reach ethnic minorities. Hispanic and Asian American youth and adults, as well as African American youth, may not be receiving the full benefit of tobacco control programs in California, because they are less likely to be exposed to tobacco control messages through multiple components. Greater efforts may be needed to disseminate tobacco control messages to these ethnic minority groups.

ENDNOTES

Endnotes—Chapter 2

1. Billboard expenditures per 100,000 people were based on (a) Competitive Media Reports Listing of National Advertisers, 1997, using voluntary reports from billboard companies, and (b) population estimates for 1997 from the U.S. Census.
2. The study sample included 44 billboard sites, from one to three miles each in length, in randomly selected commercial sections, in the largest cities in 8 of our 18 focal counties. These same sites were observed in spring 1997 and spring 1998. The total sample included 1,095 billboards in 1997 and 1,104 billboards in 1998, distributed over 95 miles. Neighborhood ethnicity was determined by identifying which of four ethnic populations had the highest percentage, in the census block groups in which the billboard sites were located, using U.S. Census Bureau block group data for race and ethnicity, for 1990.
3. Billboard proximity to public schools and playgrounds was measured using a portable global positioning system, the Garmin GPS12, 1997 model.
4. Tier 1: In 1998, an effort was made to find all events held during the year in California that had tobacco sponsorship, tobacco-sponsored participants, corporate donations, or a permanent tobacco sign at the facility. This statewide census identified 267 events. Staff for all these events were called and interviewed about intended tobacco marketing practices at these events. Tier 2: Between May and September, a phone survey was administered to all large (over 1000 people) public events in 18 focal counties, with and without tobacco marketing, to assess the prevalence and characteristics of tobacco marketing and sponsorship, and to compare the demographic characteristics of the expected audiences in tobacco and non-tobacco events. Events from comparable sources (Live Magazine, and Ticketron) for 1996 and 1998 were the only events included in the comparisons made between years (n=697 for 1996 and n=673 for 1998). Staff for all of these events were called and interviewed about the presence of tobacco marketing. Tier 3: A sample of 20 events was drawn from the 267 events identified in Tier 1, and observed on-site by IE staff to assess tobacco marketing practices and event characteristics. This sample was not randomly drawn. It involved one event from each major tobacco-sponsorship series held in California, and several large events that were the only examples of that series or brand or corporate sponsorship in California.
5. The sample included two general audience magazines, two youth entertainment magazines, four women's magazines, three men's magazines, three African American magazines (one men's, one women's, one general adult), four Hispanic magazines (two women's and two general adult) and seven local magazines from regions of California (previously reviewed in 1997). Each magazine was monitored for six months. The national and local magazines will be tracked to see if there are changes in tobacco advertising after the Master Settlement Agreement places restrictions on other forms of tobacco marketing, and on advertising in magazines with substantial youth readership.
6. Demographic breakdown of magazine audiences was drawn from the 1997 MRI Twelve plus study, Market Research Inc., 1997.

7. The 33 publications in our study represented the largest circulation newspapers in each focal county, as well as the largest circulation ethnic-audience and weekly urban entertainment newspapers. The general audience and ethnic audience newspapers included daily and weekly publications. The sample included 15 general audience, four African American, five Asian American, six Hispanic, and three weekly entertainment newspapers. The entertainment newspapers, also known as alternative newspapers, are the sort given away in restaurants, bookstores, and coffee shops. We sampled 57% of the daily issues and all of the available weekly issues for content analysis of tobacco advertisements, for a total of 7,322 issues reviewed from May 1996 - June 1998. Trained coders identified the types of tobacco ads, sponsors, and characteristics of the models.
8. Three entertainment newspapers were monitored from 1996 through June 1998 (*L.A. Weekly*, *San Francisco Bay Guardian*, San Jose *Metro*; n=225 issues from 3 publications in 1997/98), and each issue was coded for a variety of tobacco advertising-related characteristics. Comparisons over time are drawn from these three publications, with six months of issues from 1996, 1997, and 1998. In 1998 we added five more publications, from San Diego, Los Angeles, and San Francisco, to track the extent of bar sponsorship in major cities. All issues in this larger sample were reviewed in October 1996, February and October 1997, and February and October 1998 (n=162 issues from 8 publications), to identify details regarding tobacco-sponsored bar and club promotions and to compare the prevalence of tobacco brand advertisements and tobacco-sponsored bar and club advertisements. Most tobacco-sponsored bar and club nights were found in *LA Weekly*, *Orange County Weekly*, the *San Diego Reader*, the *San Francisco Bay Guardian*, and the San Jose *Metro*.
9. In the statistical analysis of store incentives, differences among groups were tested with repeated cross-measures general linear models.
10. In 1998, we collected brand merchandise catalogues and promotional literature from all convenience stores in our billboard study areas (major thoroughfares, one to three miles long, in 44 commercially zoned areas in the largest city in each of 8 counties.) The materials were collected during March, April, and May 1998. We also recruited three men and three women to sign up for tobacco company mailing lists, while at tobacco-sponsored events, or through retail store promotional materials. These six participants shared all materials received during 1988 by tobacco companies through the mail.

Endnotes—Chapter 3

1. The data for 1996 and 1998 came from different sources (progress reports in 1996 and project director surveys in 1998). Comparisons between the two pie charts are given cautiously.
2. The level of programmatic activity for 1998 was not compared to data from 1996 because the project director survey questions were different. In 1996, specific program activity questions were rated on scales with 1 = “not at all successful” to 7 = “very successful”. In 1998, these same items were rated on scales with 1 = “no effort” to 7 = “ a lot of effort”. Thus, responses in 1998 are not comparable to responses in 1996.
3. Test-retest reliability analyses for variables that assessed adult exposure to community programs were in the low range (.15 to .48). We report point estimates (mean values) for these variables under the assumption that their low test-retest reliability reflects random measurement errors around these unbiased point estimates. However, this random error indicated that the exposure variables’ relationship (correlation) to other variables (e.g. intermediate outcomes) would be greatly attenuated. As a result, these variables were not used in the effectiveness analyses sections of Chapter 3.

4. Awareness data for 1998 were measured differently than in 1996, therefore, we present no comparisons between the two waves of data collection.
5. County level effort combined the efforts of all agencies working within a county. Agency contributions were calculated as a function of the proportion of financial resources that an agency put into a county and the agency's self-rated effort in each priority area activity. More details on how this variable was calculated are available in the Technical Report that supplements this report. To examine the relationship between CPTI county-level effort and CPTI outcomes, each of the six CPTI activities rated by project directors was correlated with relevant CPTI outcomes. For example, effort to pass local CPTI laws was correlated with adults' concern about tobacco advertising, support for stronger CPTI policies, negative views of the tobacco industry, and frequency of talking about tobacco advertising, since it was expected that efforts to pass local CPTI laws could influence these outcomes. On the other hand, when it was not reasonable to expect a relationship between program efforts and certain outcomes, a correlation was not calculated (e.g., the correlation between efforts to deglamorize cigars and support for additional CPTI policy restrictions). In addition to examining the relationship between individual CPTI effort and outcomes, we constructed a CPTI effort index of the six CPTI activities. This index was correlated with each CPTI outcome to test whether the totality of community CPTI efforts was significantly associated with outcomes. The correlation's were computed on the (n = 18) counties.
6. Point prevalence data were reported for the following variables that were not included in the effectiveness analysis: awareness of local community programs (see Endnote #3) and seeing pro-tobacco advertisements.
7. Eighth-grade youth were not asked about their frequency of seeing pro-tobacco ads at sporting or community events.
8. These data were measured in 1998 only, therefore, no comparison with data from 1996 is possible.
9. See Endnote #8.
10. See Endnote #8.
11. Data for the item measuring attitudes toward reducing smoking on television and films were measured in 1998 only, therefore, no comparison with data from 1996 is possible.
12. See Endnote #2.
13. See Endnote #3.
14. See Endnote #4.
15. County-level effort combined the efforts of all agencies working within a county. Agency contributions were calculated as a function of the proportion of financial resources that an agency put into a county and the agency's self-rated effort in each priority area activity. More details on how this variable was calculated are available in the Technical Report that supplements this report. The type of county effort in ETS activities was carefully matched to the type of ETS outcome to examine the relationship between effort and outcomes. Thus, the level of effort counties put into increasing the number of families with smoke-free homes was correlated with changes in 1) ETS exposure at home and 2) the percent of families banning smoking at home. Effort put into increasing the number of families with smoke-free cars was correlated with changes in the percent of families banning smoking in family cars. Efforts to support and implement AB 13 and the smoke free bar law were correlated with changes in ETS exposure at work. Efforts in all ETS activities, i.e., combining activities addressing both private and public

source of ETS, were correlated with changes in the percent of people asking someone not to smoke. The correlation's were computed on the (n = 18) counties.

16. For data presentation in Figures 3-9 and 3-10, counties were grouped into tertiles, i.e., three groups of six counties each were created (N=18). The six counties with the highest effort scores were grouped into the "higher effort" tertile, the six counties with the lowest effort scores were grouped into the "lower effort" tertile, and the remaining six counties were grouped into the "moderate effort" tertile.
17. Point prevalence data were reported for the following variables that were not included in the effectiveness analysis: awareness of community programs (see Endnote #3); public acceptance of smoking in other public and private settings (measured in 1998 only); opinions about smoking restrictions in bars, knowledge of the smoke free bar law, seeing smoking in bars (measured in 1998 only); enforcement of smoke free bar law, collaboration to enforce the smoke free bar law (measured in 1998 only and imprecise measurement at the county level).
18. Regression analyses were conducted with potential predictors that measured the following: the importance of the tobacco problem, the importance of enforcing the smoke free bar law relative to other policies, perceived compliance of the tobacco ban, barriers to ETS/clean indoor air policies, and collaboration with other individuals or groups on education or enforcement efforts of ETS/clean indoor air policies.
19. See Endnote #8.
20. See Endnote #8.
21. There were no significant changes on any of these variables between 1996 and 1998. Therefore, to improve readability of the chapter we do not report 1996 data.
22. See Endnote #2.
23. See Endnote #3.
24. See Endnote #4.
25. County-level effort combined the efforts of all agencies working within a county. Agency contributions were calculated as a function of the proportion of financial resources that an agency put into a county and the agency's self-rated effort in each priority area activity. More details on how this variable was calculated are available in the technical report that supplements this report. The type of county effort in youth access activities was carefully matched to the type of youth access outcome, to examine the relationship between effort and outcomes. Thus, the level of effort counties put into promoting the Stake Act 1-800 number was correlated with changes in the percent of adults calling the number. Effort put into passing youth access policies, creating support for existing policies, educating merchants about not selling tobacco to youth, and working with police to conduct "sting" or undercover sales operations was combined and correlated with changes in the percent of youth getting their last cigarette from a retail source, youth success at purchasing cigarettes, and perceived ease of getting cigarettes. The correlation's were computed on the (n = 18) counties.
26. Point prevalence data were reported for the following variables that were not included in the effectiveness analysis: awareness of community programs (see Endnote #3); perceived difficulty of obtaining cigarettes from social sources; who adults gave cigarettes to (measured in 1998 only); adult opinions of whether youth access should focus on merchants, youth, or both (measured in 1998 only).

27. For 1996 to 1998 comparisons, we compared data for enforcement agencies that responded in 1996 and 1998 with a McNemar test.
28. This analysis was conducted as a logistic regression equation with past year enforcement (yes/no) as the dependent variable. The independent variables were: perception of whether youth access is a problem in their community, perceived importance of merchant and minor enforcement, perceived compliance rate, barriers to enforcement, and level of collaboration with other people or organizations.
29. See Endnote #27
30. See Endnote #21.
31. See Endnote #8.
32. This table represents a different breakdown of the data that is shown in Figures 3-20a and 3-20b for 1998. For example, looking at the 10th-grade data, the 77% of 10th-graders who got their last cigarette from a social source – as shown in the figure – can be calculated by subtracting the following numbers shown on Table 3-8: 86% (Social) – 9% (I took them from a person without permission). The 10% "retail" in the figure equals the 10% "I bought them for myself" and the 10% "stealing" in the figure equals the 9% "I took them from a person" plus 1% "I took them from a store" as shown in Table 3-8.
33. In 1998, adults were asked two questions separating whether someone under 18 had asked them to buy or give them cigarettes. In 1996, this was asked in one question. Thus, 1996 and 1998 data are not comparable.
34. These numbers exceed 100% because these categories are not mutually exclusive. Adults were asked if in the past year, underage youth had asked them to buy tobacco. If so, they were asked if they had been approached by friends, by relatives, and by strangers.

Endnotes—Chapter 4

1. Expenditures were based on TCS media plans, distribution costs, and schedules for each ad, for 1997 and 1998. The primary focus area of each ad was based on content analysis by IE staff.
2. The media ads in the surveys included the following:

   (a) Voicebox (TV) - Debi speaks and smokes through a throat hole (CPTI and Cessation/helpline versions)
   (b) Cattle (TV) - cowboy herds children into a pen (CPTI)
   (c) Rain (TV) - cigarettes rain down on children at a playground (CPTI)
   (d) Toilets (TV) - toilets march out of a restroom where teen boys are smoking (ETS)
   (e) Waitress (TV and Radio versions) - waitress asks smokers to help by complying with new law (ETS)
   (f) Baby Blocks (TV) - baby spells out smoking-related diseases while father smokes (ETS)
   (g) Chad (TV) - man guesses how many cigarettes he'd have to smoke at one time to match the nicotine in one cigar (Prevention and Cessation)
   (h) Hooked (TV) - businessman hooks fish like the industry hooks smokers (last shown in 1996) (CPTI)
   (i) Board Room (TV) - businessmen discuss how to get more people to start smoking (last shown in 1995) (CPTI)
   (j) Thank You (Radio) - graduation ceremony speaker thanks young people for becoming smokers (CPTI)

(k) Bob (Billboard) - cowboy on horse tells his friend, Bob, he has a smoking-related illness (CPTI)

3. Recall of the 1997-1998 media ads was measured by describing each ad, then asking if the respondent recalled seeing or hearing it. To determine total campaign exposure, an index was constructed that summed recall of the individual ads listed in Table 4-1. To determine media campaign exposure in 1996, a similar index was constructed based on recall of:

   (a) For adults: 4 television, 3 radio, and 2 outdoor ads
   (b) For 10th-graders: 3 television, 3 radio, and 2 outdoor ads
   (c) For 8th graders: 2 television, 2 radio, and 2 outdoor ads

4. The analysis of differential campaign exposure among population sub-groups of youth and adults was restricted to those who said they spoke only English, mostly English, or half-English at home. (i.e., those who said they spoke mostly another language or only another language at home were excluded from the analysis.

5. Tenth-grade youth were asked to mark all their emotional reactions that applied to a particular anti-tobacco commercial, including: I did not see this commercial; it made me sad; it made me angry; it made me laugh; it disgusted me (grossed me out); it made me happy; I saw the commercial but I don't remember how I reacted. Emotions identified by at least 30% of respondents were listed in this report.

6. In these analyses, exposure to the media was measured by an index that summed the number of media spots that respondents accurately recalled seeing (TV and billboard) or hearing (radio) in 1998 (i.e., the number whose meaning they identified correctly). Regression analyses were conducted to examine associations between media exposure and relevant outcomes, using individuals as the units of analysis and controlling for the random effects of county and sampling strata. These analyses were conducted separately for 8th- and 10th-grade youth and adult and opinion leader respondents.

   Relevant youth outcomes included: negative attitudes towards the tobacco industry, belief that ETS causes cancer, index of beliefs that tobacco has negative consequences, index of beliefs that tobacco has positive consequences, index of opinions about policies (10th-graders only), susceptibility to tobacco use, likelihood of refusing a tobacco offer from a friend, ETS exposure in the last 7 days, past 30-day smoking, calls to the helpline, and quit attempts in past year (10th-graders only).

   Relevant adult outcomes included: negative attitudes towards the tobacco industry, belief that ETS causes cancer, index of opinions about policies, preference for smokefree bars, awareness of the reason for the bar ban, ETS exposure in the last 7 days, past 30-day smoking, calls to the smoker's helpline, and quit attempts in past year.

7. In these analyses, an index was created by summing the number of ads that respondents talked about with a family member, friends or others, out of the total ads they saw/heard.

8. Susceptibility to smoke is defined as the absence of a conscious decision not to smoke another cigarette, measured by whether the student had ever smoked a cigarette, and whether or not they intended to smoke in the future.

Endnotes—Chapter 5

1. Throughout this chapter, analyses of lesson delivery among 8th-grade teachers are restricted to those who taught health and/or science, which are the middle school subject areas in which tobacco lessons are typically taught. Analyses of delivery among 10th-grade teachers in

comprehensive high schools are restricted to those who taught health and/or physical education, which are the most common subject areas for tobacco instruction at the high school level. For analyses on continuation high school teachers, all are included regardless of which subjects they taught. Analyses regarding school policies, training, and cessation efforts were conducted on the full sample of teachers.

2. The total number of continuation high schools that had teacher data available was 20, therefore there was limited statistical power to detect differences between Grantee and Non-grantee schools.
3. This information was provided by the California Department of Education (CDE). The total number of districts that were not certified as tobacco-free as of 2/19/99, per the CDE Healthy Kids Office (n=34), was divided by the total number of districts in the state (n=997), to derive the proportion that are tobacco-free.
4. The analyses regarding changes in policy compliance and violations were restricted to the 60 comprehensive high schools that were included in the sample in both 1996 and 1998.
5. For 5th- and 8th-graders, differences in outcomes are reported for students in all schools in both waves. For comprehensive high school youth, changes in outcomes from 1996 to 1998 are not reported, with the exception of tobacco use prevalence, since about half of the 60 schools that participated in the study in both years changed their TUPE grantee status between the two waves. Thus, any differences we may have found between the two waves could have been attributable to the changes in schools' TUPE status. In Wave 2, there were 37 TUPE Grantee and 42 Non-grantee comprehensive high schools. Among continuation high schools, there were 8 Grantees and 11 Non-grantees. It should also be noted that the Wave 2 comprehensive high school survey was conducted in Spring 1998, and the continuation high school survey was conducted in Spring 1999.
6. The measure of lifetime smoking is the proportion of youth who have ever tried a cigarette, even a few puffs. Thirty-day smoking is the proportion who smoked a cigarette on at least one day during the 30 days prior to the survey. Lifetime smokeless tobacco use is the proportion who have ever tried chewing tobacco or snuff. Thirty-day smokeless tobacco use is the proportion who used chewing tobacco or snuff on at least one day during the 30 days prior to the survey. Lifetime cigar use is the proportion who have ever tried a cigar, even a few puffs. Thirty-day cigar use is the proportion who have smoked a cigar on at least one day during the 30 days prior to the survey.
7. The sample of continuation high school students was older than the sample of comprehensive high school students. All of the comprehensive high school students were 10th-graders. The grade distribution in the continuation high school sample was as follows: 5% 9th-grade, 23% 10th-grade, 43% 11th-grade, and 29% 12th-grade.
8. The analyses of quit rates were restricted to those students who reported they had smoked 100 cigarettes or more in their lifetime.
9. To test differences between 1996 and 1998, two indices, Positive Consequences (a mean of 5 items) and Negative Consequences (a mean of 7 items) were created for each grade level.
10. For the 8th- and 10th-graders, an index of negative attitudes toward the tobacco industry was created by averaging responses to three items. In the 5th-grade survey, only one item related to negative attitudes toward the industry was included.
11. The knowledge score was a sum of five items that assessed students' knowledge of the effects of smoking on asthma, the effects of smoking on pregnant women, whether or not teenagers are too

young to get addicted to tobacco, whether there are other harmful substances in tobacco besides nicotine, and whether or not most young people smoke cigarettes.

12. Program exposure during the 1996-97 school year, measured in the 1998 survey, was a composite index that averaged students' self-reported exposure to at least one tobacco lesson, Great American Smokeout event, other school wide tobacco-specific assembly or event, and/or guest speaker about tobacco issues. Because most schools implemented more than one of these TUPE program components, we could not investigate the independent effectiveness of each component. Difference scores (1998-1996) were created for the following outcome variables: lifetime and 30-day cigarette use, lifetime and 30-day smokeless tobacco use, lifetime cigar use, quit attempts in past year (8th-graders only), beliefs about positive consequences (index), beliefs about negative consequences (index), perceived acceptability of smoking among peers, perceived prevalence of smoking among peers, refusal self-efficacy, tobacco-related knowledge (summed score), and negative attitudes toward the tobacco industry (index). The effects of exposure were tested with regression models, using school as the unit of analysis (i.e., school means), and controlling for the random effect of schools nested within counties.

Endnotes—Chapter 6

1. For youth, the key outcome variables were perceived access to cigarettes, negative attitudes toward the tobacco industry, perceived importance of tobacco-related issues, prevalence estimates of peer smoking, perceived positive consequences of smoking, perceived negative consequences of smoking, cigarette refusal self-efficacy, exposure to ETS, susceptibility to smoking, 30-day smoking prevalence, and quit attempts. For adults, the key outcome variables were support for tobacco control policies, asking someone not to smoke, exposure to ETS, smoking prevalence, and quit attempts. These measures were selected because (1) they were key outcomes in our conceptual model, and (2) they were measured with comparable questionnaire items in both waves, so we could compare changes over time.
2. Because of the small sample size (N=18), we used effect size as the criterion for reporting results, rather than statistical significance. We report effect sizes greater than or equal to .20 (small to moderate effect sizes) (Cohen, 1988). The results reported in this chapter are those that had effect sizes of .20 or larger. Although other analyses were conducted as described in Endnote #1, the results of these analyses are not reported if they had effect sizes smaller than .20. We also report the p-value for all results significant at $p<.10$.

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APPENDIX

INDEPENDENT EVALUATION METHODS

INDEPENDENT EVALUATION METHODS

Design

The Independent Evaluation of California's Tobacco Control Program (TCP) was designed to determine the effectiveness of tobacco control activities conducted through community programs, schools, and the statewide media campaign. The evaluation utilizes a quasi-experimental observational design that includes three sequential, cross-sectional waves of data collection. The first wave was conducted from October 1996 to February 1997. The second wave, described in this report, was conducted from March to July, 1998. The third wave of data collection will be conducted from October 1999 to February 2000. Both individual level and county level data are included in this evaluation. When county level data were examined, we were able to take advantage of the longitudinal design features, as the same counties were sampled at each wave of data collection.

Sampling Scheme

A two-tiered sampling strategy was utilized. This strategy allowed an intensive evaluation in selected geographic areas while also providing data on tobacco control programs and activities statewide. The first, more intensive tier includes 18 counties as the Primary Sampling Units (PSUs). In these counties, which we refer to as the "*focal counties,*" we have collected and analyzed two waves of data obtained via a community survey of adults, a school-based youth survey, a community survey of opinion leaders, a community survey of law enforcement agency personnel, an assessment of media activities, and monitoring of policy development and enforcement activities.

The second tier includes the remaining 40 California counties and 3 cities that serve as Local Lead Agencies (LLAs), which were not selected as focal counties. We conducted surveys of project directors in the following types of agencies located within these 43 jurisdictions: LLAs, Regional Community Linkage Projects, Ethnic Networks, and Grantees. Data from only agencies that work in the focal counties are included in county-level estimates presented in this report.

To determine which of California's counties fell into each tier, a cluster solution approach was used. The approach selected representative areas from among California's 58 counties. We eliminated the three California municipalities from among the 61 possible Local Lead Agencies that could have been selected. We also wanted to be certain to include the five largest media markets according to the population served in our evaluation. Therefore, the five largest media markets, Fresno, Los Angeles, Sacramento, San Diego, and San Francisco, were preselected. The remaining sampling frame to which cluster analysis was applied was 53 counties. The analysis was designed to form three clusters (strata) based on county population density (population per square mile) and percent rural area. Four to five counties within each of these strata were randomly selected, for a total of 13 counties. These 13 counties plus the five media market counties yielded the sample of 18 focal counties, which includes:

18 Focal Counties

Media Markets	Medium-Density	High-Density	Low-Density
Fresno	Monterey	Alameda	Lake
Los Angeles	San Bernardino	Contra Costa	Lassen
Sacramento	Shasta	Orange	Mono
San Diego	Yuba	San Mateo	Plumas
San Francisco		Santa Clara	

Methods

Multiple data-collection methods were used to examine program activities in counties across the state, and individual- and community-level outcome indicators in the 18 focal counties. A brief description of each method is presented below.

Information on *implementation* of tobacco control programs and activities was gathered from the following sources:

1. Project Director Surveys were developed and mailed to project directors of 152 TCS-funded projects (including all Local Lead agencies, Regions, Ethnic Networks, and Grantees). The project director survey, previously developed as a supplement to progress report information (coded in Wave 1 only), was revised in Wave 2 to obtain more comprehensive program information. The project director survey included items on agency collaboration, specific program activity efforts, program focus and audience, media usage, barriers, policy, and enforcement activities. The survey response rate was 90% (n=137). For this Wave 2 report, analyses are restricted to data from 83 of these respondents who conducted tobacco control activities in one or more of the 18 evaluation counties.
2. Teacher Surveys were administered to fifth-, eighth-, and 10th-grade teachers in whose classrooms we assessed students. In addition, in middle and high schools the principal was asked to identify teachers who were responsible for providing tobacco education. A survey was mailed to those individuals. The survey assessed levels of tobacco program implementation, student responses to prevention programs, enforcement of school tobacco-free policies, parental involvement in prevention, and barriers to program implementation. A response rate of 90% (n=443) was achieved on site, and 43% (n=151) was achieved by mail. In continuation high schools, teacher surveys were administered on site only. A total of 33 teachers in 20 schools completed the survey.
3. School Administrator Surveys were mailed to administrators of each school (n=207) that participated in the youth survey. The survey assessed levels of program implementation in the school, enforcement of school tobacco-free policies, and principal attitudes toward the tobacco education program. A response rate of 81% (n=188) was achieved.

4. School District TUPE Coordinator Surveys were mailed to the TUPE Coordinator in each of the school districts in which we conducted youth surveys (n=53), as well as to a random sample of 38 additional districts in the focal counties. The survey assessed what types of prevention and cessation activities were implemented, how programmatic decisions were made and communicated, types and amount of staff development activities, and coordination with community programs. A response rate of 84% (n=76) was achieved.
5. Media Dissemination Schedules and Financial Statements were obtained from the lead and two ethnic contractors for the statewide media campaign. This information was used to assess how much effort and money the media campaign spent in each TCS priority area for the general audience.
6. Content Analysis of Statewide Media Campaign was conducted to assess what types of media messages were disseminated via television, radio, outdoor, and print advertisements between January 1, 1997 and June 30, 1998. The analysis examined message priority area focus and objective. One coder with a Masters degree in communication reviewed all 40 media spots.
7. Funding and Budget Information for CDHS- and CDE-funded community, media, and school programs was obtained for the fiscal years from 1990 to 1998.

Data on *program outcomes* were obtained using the following methods:

1. Adult Computer-Assisted Telephone Interviews (CATIs) were conducted with approximately 384 adults in randomly selected households in each of the 18 focal counties. In addition, an oversample survey of 1,218 minorities was conducted throughout the focal counties. The interviews assessed opinions, attitudes and actions taken regarding tobacco and tobacco control activities. Interviewers successfully contacted 26,682 randomly selected telephone numbers of 34,150 working number attempts (78% contact rate). Of the successful contacts, 7,206 (27%) refused to complete the screening questions and 3,903 (15%) did not complete the screening for other reasons. The remaining 15,573 cooperated with the interviewers (58% cooperation rate); 8,572 were successfully screened and eligible to complete the interview; and 8,122 actually completed the interview (95% completion rate).[1]
2. School-Based Youth Surveys of 16,748 students (n=3065 in grade 5; n=5457 in grade 8; and n=8226 in grade 10) from 207 schools across the 18 focal counties were conducted during the 1997-98 school year. At the beginning of the evaluation, school districts had been randomly selected in each focal county and schools had been randomly selected within each district, in order to assess students in grades 5 and 8. At the high school level, two groups of schools, TUPE Grantees and Non-grantees, were randomly selected in each county. Of the 128 schools that serve students in grades 5 and 8 and participated in Wave 1, 97% participated in Wave 2. Of the 67 high schools that participated in Wave 1, 94% participated in Wave 2. In all schools, classrooms of students were randomly selected to participate in the evaluation. The student survey assessed students' tobacco-related beliefs, attitudes, knowledge and behaviors, and exposure to tobacco control programs in schools, communities, and the mass media. In Wave 2, parental consent to participate was obtained for 97% of the students, and student consent was obtained for 99% of students whose parents provided consent.
3. School-based Surveys of Continuation High School Youth in grades 9 to 12 (n=1120), enrolled in 26 continuation high schools, were administered in Spring 1999. The randomly selected school sample included both TUPE Grantee and Non-grantee continuation high schools in the focal evaluation counties. Parental consent was provided for 99.8% of the students, and student consent was obtained for 98% of the students whose parents provided consent.

4. Opinion Leader Computer-Assisted Telephone Interviews (CATIs) were conducted with individuals in 24 positions of leadership within the following five categories: government officials, law enforcement officials, education officials, media representatives, and business representatives. A comprehensive list of 2,734 individuals filling these positions in the 18 focal counties was compiled. A county quota was determined for each position based on the nature of the position and the size of the county. Respondents were randomly selected from within each position to fill the county quota. A total of 503 interviews were completed. Ninety percent of the desired quota was fulfilled.[2] Representatives of health organizations were not surveyed in 1998 after 1996 evaluation results indicated high levels of existing support for, and involvement in tobacco control activities. Although there was slight overlap between the 1998 and 1996 samples, they are independent samples.
5. Enforcement Agency Surveys focused on both the enforcement of PC308 (prohibiting the sales of tobacco products to minors and possession of tobacco products by minors) and AB 13 (banning smoking in public places). The PC308 survey was sent to all police and sheriff's departments in the 18 evaluation counties (n=226). Valid PC308 surveys were received from 182 enforcement agencies, for a response rate of 81%. The AB 13 survey was sent to all agencies identified as being involved in the enforcement of AB 13 policies; this included police departments, sheriff's departments, health departments, and city offices (n=302). AB 13 surveys were received from 241 agencies, for a response rate of 80%.[3] Of these agencies, 207 were considered primary enforcers of the law (i.e. agencies who issued citations) and 34 agencies shared enforcement responsibilities with the primary enforcers (i.e. fielded complaints, wrote letters, etc).
6. Tobacco Industry Monitoring Data were collected by observation of tobacco marketing through local newspapers, billboards, events, magazines, transit displays, bars and clubs, cigar nights, retail outlets, direct mail materials, and brand merchandise catalogs. Coding schemes were developed to assess the amount and content of pro-tobacco industry activities in California and elsewhere in the nation.
7. Local Policy Data on tobacco control policies for all California municipalities were obtained from the American Nonsmokers Rights Foundation. The data were reviewed and coded to determine the amount and type of local policy enactment from January 1997 through June 1998. When necessary, local officials were contacted to clarify policy activity or obtain additional information. Included in this report is information about the specific types of ordinance provisions passed in both Wave 1 and Wave 2 of the IE. We are unable to present data from earlier time periods because the American Nonsmokers Rights Foundation does not keep an historical record of when different provisions in an ordinance were passed. The database includes data on when an ordinance was first passed and when the last amendment was made, but it overwrites the dates of amendment activity in-between.
8. STAKE Act 1-800 Phone Call Data from January 1996 to September 1998 were obtained from the STAKE Program, Food and Drug Branch of the Department of Health Services via TCS.
9. California Adult Tobacco Survey (CATS) and California Youth Tobacco Survey (CYTS) data for 1993 through 1997 were obtained electronically from CDHS/TCS.

1. The overall CASRO (Contact x Cooperation x Completion) response rate for the adult telephone survey was 35%.
2. The overall CASRO response rate for the Opinion Leader survey was 69%.
3. The response rate for our initial list of enforcement agencies was higher (84%). In order to get a more comprehensive picture, we expanded our denominator to include agencies that were mentioned by other agencies via survey or phone calls as participating in AB 13 enforcement.

Data Analytic Approach

In this Final Report of Wave 2 data, five general types of analyses are presented:

- Descriptive analyses of local TCP implementation, i.e., the type, amount, and reach of programs and activities
- Descriptive analyses of TCP outcomes, including changes in outcomes from Wave 1 to Wave 2, outcome variables that were new in Wave 2, and subgroup differences in outcomes
- Descriptive analyses of the Tobacco Industry Monitoring Evaluation data
- Effectiveness analyses of independent relationships between each of the primary TCP components - community programs, statewide media, and school-based programs - and TCP intermediary outcomes
- Effectiveness analyses of the combined effects of exposure to the three TCP components on changes (Wave 1 to Wave 2) in TCP intermediary and ultimate outcomes

Program "dosage" was assessed by collecting data from both program implementers or "senders" (e.g., LLA project directors, school teachers, etc.), and individuals who were exposed to tobacco control activities in communities (i.e., "receivers" such as youth, adults, and opinion leaders). The data from senders provided information about levels of *program implementation or effort*. For example, we asked teachers how much time they had devoted to tobacco prevention instruction during the previous year, and we asked local program directors how much effort they devoted to specific activities related to each CDHS/TCS priority area.

To measure *program exposure* among the receivers, we included survey questions such as, "Have you heard of efforts in your county to enforce AB 13, the law that bans smoking in restaurants and workplaces?" and "During the past year, did you have any school lessons about tobacco use?" In the data analyses, we used both data from senders (i.e., levels of program effort) and data from receivers (i.e., levels of program exposure) to determine program effectiveness, or the extent to which the TCP was associated with program outcomes.

The appropriate analytic approach was chosen for each TCP component. These approaches varied in regard to the unit of analysis used, the statistical analysis software employed, and whether program effort or program exposure was used as the independent variable in effectiveness analyses. The overall approach used for each component is described below. For more detailed information about these analytic approaches, the reader is referred to the companion document, *Technical Report for Wave 2 Data*.

Local Programs Component Analyses

Descriptive Analyses. Descriptive statistics, such as proportions and mean estimates, and hypothesis testing of group differences, were calculated with the individual as the unit of analysis. The adult and youth data were collected using population-sampling methodology, thus *groups* rather than individuals were sampled. As a result, standard statistical analyses that assume a simple random sample of independent individuals were inappropriate for these analyses. To calculate correct error estimates for hypothesis testing, we employed SUDAAN 7.5.2 to take into account the complex sampling design (Shah, Barnwell, & Beiler, 1997).

All individual-level analyses of adult data were weighted. Sample weights were applied to the data based on 1998 population estimates obtained from CLARATAS's online database. Sample weights were adjusted for an individual's probability of inclusion in the sample as well as to reflect California's population proportions based on the variables Hispanic origin, race, age, and gender.

Effectiveness Analyses. To examine relationships between local tobacco control programs and relevant outcomes, individual level data were aggregated to the county level and weighted, and means of the 18 focal counties were created and treated as the unit of analysis. The county-level analysis allowed us to examine change at the county level from 1996 (Wave 1) to 1998 (Wave 2). We assessed program effectiveness by examining the correlation between a measure of TCP input measured at Wave 2 (e.g., local agency efforts to encourage smoke-free homes) and a change in outcome between 1996 and 1998 (e.g., change in percentage of adults reporting exposure to ETS in their homes). When an outcome of interest was not measured at Wave 1 evaluation, the correlation between the TCP input and outcome measured at Wave 2 was calculated. TCP input measures were calculated using survey data on activity efforts of local TCP agency project directors and financial data about the total amount of TCP funding awarded to agencies working within a county.

An emphasis was placed on the practical significance of effects rather than solely on statistical significance. With a sample size of 18, a correlation of .47 is statistically significant for a two-tailed test with a .05 Type I error rate. A correlation of this magnitude is considered between a medium and a large effect size in social science research (Cohen, 1988). For the effectiveness analyses, we view correlation's with an absolute value of .20 or greater (explaining greater than 4% of the variance) as having practical significance. However, we have provided p-value information for significance levels of $p<.10$ or less as an additional guide to interpretation of the results.

Opinion Leader Analyses

Descriptive Analyses. All analyses on the opinion leader data were conducted using the individual as the unit of analysis. Because the opinion leader sample was a self-weighting listed sample, descriptive statistics and hypothesis testing of group differences was conducted with standard statistical procedures using SPSS version 7.5.

Effectiveness Analyses. The opinion leader survey used measures of awareness of community programs and community program participation as indicators of exposure to TCP programs. The sampling of opinion leaders employed a different method than the sampling of adults and did not allow for examination of changes in outcomes between 1996 and 1998. Thus, effectiveness analyses examined the magnitude of the relationship between outcomes and exposure with correlation coefficients. The combined contribution of exposure to community and media program components on outcomes was assessed with multiple linear or multiple logistic regression analyses.

Media Campaign Analyses

Descriptive Analyses. Descriptive statistics such as proportions, and hypothesis testing of group differences, were calculated with the individual as the unit of analysis. Adult data were weighted as described above.

Analyses utilizing youth data were weighted as well. These weights were based on the 1997-1998 California Department of Education (CDE) enrollment databases. Each student in our database received a school weight (a number greater than one). To create the final weight, the school weights were aggregated to the CDE enrollment counts. The final weight was then divided by the average weight in the dataset to create the relative weight. This was done to make the sum of the weights match the sample size.

Effectiveness Analyses. We assessed media program effectiveness by examining correlation's between exposure to the 1997-98 media campaign and relevant Wave 2 (1998) outcomes. These analyses were conducted separately for adults, 10th-graders, and 8th-graders, using individuals as the units of analysis. Regression models were run using PROC MIXED in SAS Version 6.12, controlling for intraclass correlation's by including random effects of county and strata for adults, and county, strata, and school for youth. For all regression models, we have provided p-values for significance levels of $p<.05$ or less.

School-based TUPE Program Analyses

Descriptive Analyses. Descriptive statistics using youth data were calculated with the individual as the unit of analysis. Youth data were weighted as described above. The majority of analyses using teacher and school administrator data were conducted at the school level. That is, school means were created, aggregating the responses of individual teachers at that school. For analyses of changes in program outcomes among students, regression models were conducted using PROC MIXED in SAS Version 6.12. In these models, individual was the unit of analysis, the models controlled for the random effects of school, county, and strata, and they tested the effect of Wave.

Effectiveness Analyses. To examine relationships between school programs and relevant student outcomes, school was the unit of analysis. For 5th- and 8th-grade students, we assessed program effectiveness by examining the correlation between exposure to school program components at Wave 2 (representing exposure during the 1996-97 school year) and changes in outcomes between 1996 (Wave 1) and 1998 (Wave 2). Regression models were run using SAS PROC MIXED, including the random effects of strata, counties nested within strata, and schools nested within counties. For high school students, we assessed program effectiveness by comparing outcomes in TUPE Grantee vs. Non-grantee schools. These analyses were done at the school level (i.e., using school means as dependent variables). SAS PROC MIXED regression models included random effects for strata and counties nested within strata. For all regression models, we have provided p-values for significance levels of $p<.10$ or less.

Overall Program Impact Analyses

Descriptive Analyses. Descriptive statistics of multi-component program exposure, including subgroup differences in exposure, were conducted at the level of individual youths or adults.

Effectiveness Analyses. Youth and adult data were aggregated to the level of county (i.e., county means were created) for analyses of overall program effectiveness. In these analyses, the program exposure measure represented the proportion of youth or adults in the county who reported in Wave 2 that they had been exposed to two or more TCP components. Regression models were conducted in SAS PROC REG, using a difference score (Wave 2 outcome - Wave 1 outcome) as the dependent variable.

Because of the small sample size (n=18 counties), effect size is used as the criterion for reporting results, rather than statistical significance. We report effect sizes of greater than or equal to .20 (small to moderate effect sizes) (Cohen, 1988). We also report the p-value for all results significant at the level of $p<.10$.

Limitations of Program Effectiveness Analyses

This Independent Evaluation employs a quasi-experimental observational design in which we are observing TCP activities and outcomes at different points in time over a five-year period. We do not have a comparison or control group, which would considerably strengthen our capability to attribute outcomes to program efforts. Furthermore, our baseline (Wave 1) data were collected after the TCP had been in effect for seven years. To determine program effectiveness, we have examined associations between program efforts or program exposure that occurred between Wave 1 (1996) and Wave 2 (1998), and changes in outcomes from Wave 1 to Wave 2. We have employed statistical techniques (e.g., repeated measures multiple regression) that are appropriate for testing whether the TCP *may have caused* the changes that we observed. However, with the absence of a comparison group, we are limited in the extent to which we can state that the program caused the outcomes.

It should also be noted that this evaluation was not designed to make definitive conclusions about the effectiveness of individual activities, strategies, or programs (e.g., specific media spots, curricula, or interventions) that comprise the comprehensive TCP effort. An experimental trial is the preferred methodology for answering questions about the effectiveness of a specific program strategy. In our case, most of the individual program strategies have been employed in conjunction with numerous other strategies. Thus, we cannot isolate counties that implemented one specific strategy only, or groups of individuals who were exposed to one programmatic activity only. However, we are able to describe the effectiveness of groups of program activities and strategies that were implemented within the primary TCP components, community programs, school-based programs, and the mass media campaign.